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WATERSHED MANAGEMENT AND NONPOINT SOURCE POLLUTION: THE MASSACHUSETTS APPROACH

*Scott D. Anderson**

Nonpoint source pollution continues to frustrate the Clean Water Act's (CWA) promise of restoring and maintaining the integrity of our nation's waterways. Although programs exist within the CWA to assist states with abating nonpoint source pollution, these programs have not prevented nonpoint source pollution, or polluted runoff, from contributing an increasing load of pollutants to our rivers, lakes and streams. Recent case law has expanded the power of states, and in certain circumstances, citizens, to use the CWA to place restrictions on certain activities that are likely to damage water quality. However, the legal, social, and political limitations, both exerted on the case law and the CWA generally, will limit the practical further use of the CWA to stop nonpoint source pollution. Thus, another strategy is needed. Massachusetts has instituted a watershed-based resource management plan called the Massachusetts Watershed Initiative (MWI). The MWI promises to redefine environmental resource protection by involving local stakeholders in setting priorities for protecting local resources. By limiting the use of "command and control" regulation, and by focusing on the watershed as the relevant environmental entity, the MWI offers an alternative to traditional statutory attempts to control nonpoint source pollution.

INTRODUCTION

After twenty-five years of water pollution regulation under the 1972 Clean Water Act (CWA or the Act),¹ the control of nonpoint

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¹ 33 U.S.C. §§ 1251-1387 (1994).

source pollution continues to frustrate the CWA's stated goal to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."² Nonpoint source pollution,³ or polluted runoff, remains a leading cause of water pollution in both agricultural and urban areas.⁴ Regardless of the large economic expenditures by industry and municipal wastewater systems to reduce point source pollution, forty percent of our nation's waterways still do not meet minimum federal guidelines.⁵

Although programs to address nonpoint source pollution exist in the text of the Act,⁶ this legislation has failed to result in meaningful protection of the nation's waterways from nonpoint source pollution.⁷ Both the current section 319 and its predecessor, section 208, were enacted to assist states in identifying nonpoint source pollutants and reducing their effect on water quality.⁸ Although these sections have resulted in some nonpoint source reductions, these programs have suffered from underfunding, agency inaction, and institutional and political setbacks.⁹

Although the primary enforcement mechanism under the CWA is currently based on federal enforcement of effluent limitations, water quality standards set by the states may offer some protection from

² *Id.* § 1251(a).

³ The CWA defines point source as:

any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharge and return flows from irrigated agriculture.

Id. § 1362(14). This term is summarized as point sources or point sources with conveyances. *See id.* Although the common use of point source suggests a pipe or other discrete discharge entering a waterway, construction equipment such as dump trucks, earth movers, and mobile irrigation systems (if not for agriculture) have been treated as point sources.

⁴ *See Farm, Urban Runoff, Municipal Sources Top Pollution Causes, EPA Tells Congress*, [1993-1994] 24 *Env't Rep. (BNA)* 2228, 2228 (Apr. 29, 1994).

⁵ *See id.* at 2229. A 1994 report released by the Natural Resources Defense Council (NRDC) claimed that the CWA had resulted only in a partial success in cleaning up the nation's waterways. *See Only Limited Success Made in Meeting CWA Goals in Past 20 Years, NRDC Says*, [1993-1994] 24 *Env't Rep. (BNA)* 1071, 1071 (Oct. 3, 1993). The report documented that polluted runoff from agriculture, urban areas and other nonpoint sources was responsible for preventing 125,000 miles of rivers, 2 million acres of lakes, 1.2 million acres of coastal areas, and 5000 square miles of estuaries from meeting minimum federal guidelines under the CWA. *See id.*

⁶ 33 U.S.C. §§ 1288, 1329.

⁷ *See* Jerry L. Anderson, *The Environmental Revolution at Twenty-Five*, 26 *RUTGERS L.J.* 395, 399 (1995).

⁸ 33 U.S.C. §§ 1288, 1329.

⁹ *See* WILLIAM GOLDFARB, *WATER LAW* 225-30 (1988) [hereinafter *WATER LAW*].

nonpoint source pollution.¹⁰ Several recent court decisions have expanded the scope of state and citizen authority by allowing new restrictions on federally permitted activities that may affect water quality.¹¹

This Comment argues that the current CWA is unable to prevent the further degradation of our waterways from nonpoint source pollution. Recent case law interpreting the CWA, although somewhat expanding the scope of the CWA to protect water quality standards, does not support an assertion that the CWA may be used to regulate nonpoint source pollution.¹² Because of the limitations of the CWA, "watershed management" should be considered as an alternative to address nonpoint source pollution.¹³ Utilizing a multidisciplinary approach that considers the actions of a greater number of individuals and groups, watershed management offers an alternative to the traditional command and control mechanism of water pollution enforcement.¹⁴

Part I of this Comment summarizes the statutory attempts to regulate nonpoint source pollution before and after the passage of the 1972 amendments of the CWA. Part II will analyze recent case law regarding the CWA as it applies to water quality standards, and specifically, nonpoint source pollution.¹⁵ These cases suggest that nonpoint source pollution might be further regulated under the CWA through the use of state water quality standards.¹⁶ Part III will discuss the failure of the CWA to result in nonpoint source pollution abatement, along with the judicial, statutory, political, and institutional factors that limit the application of the holdings of the cases discussed in Part II. Part IV will discuss watershed management alternatives to statutory regulation of nonpoint source pollution. Part

¹⁰ See *infra* Part II.

¹¹ See PUD No. 1 Jefferson County v. Washington Dep't of Ecology, 511 U.S. 700, 711 (1994); Oregon Natural Desert Ass'n v. Dombeck, 151 F.3d 945, 948 (9th Cir. 1998); Northwest Env'tl. Advocates v. Portland, 56 F.3d 979, 987 (9th Cir. 1995); Oregon Natural Desert Ass'n v. Thomas, 940 F. Supp. 1534, 1541 (D. Or. 1996), *rev'd*, 151 F.3d 945 (9th Cir. 1998); see also *infra* Part II.

¹² See *infra* Part II.

¹³ See generally William Goldfarb, *Watershed Management: Slogan or Solution?*, 21 B.C. ENVTL. AFF. L. REV. 483 (1994).

¹⁴ See Robert W. Adler, *Addressing Barriers to Watershed Protection*, 25 ENVTL. L. 973, 977 (1995).

¹⁵ See generally *Jefferson County*, 511 U.S. at 700; *Dombeck*, 151 F.3d at 945; *Northwest Env'tl. Advocates*, 56 F.3d at 979; *Thomas*, 940 F. Supp. at 1534.

¹⁶ See generally Michael P. Healy, *Still Dirty After Twenty-Five Years: Water Quality Standard Enforcement and the Availability of Citizen Suits*, 24 ECOLOGY L.Q. 393 (1997).

V will analyze one watershed management project, the Massachusetts Watershed Initiative (MWI), and make recommendations for how the MWI can succeed where other watershed-based management plans have failed.

I. STATUTORY ATTEMPTS TO ADDRESS NONPOINT SOURCE POLLUTION

A. *1948 Federal Water Pollution Control Act & Water Quality Act of 1965*

The 1948 Federal Water Pollution Control Act (FWPCA)¹⁷ was enacted primarily to assist the states in preventing water pollution through technical grants and loans for building public wastewater treatment works.¹⁸ The 1965 Water Quality Act required individual states to set water quality standards to establish discharge limits for industrial and municipal discharges.¹⁹

In practice, many commentators concluded that reliance on water quality standards under these statutes had been a failure.²⁰ Prior to the enactment of the 1972 CWA amendments, the practice of states establishing acceptable concentrations of pollutants for different water bodies did not result in noticeable improvements in water quality.²¹ These state-set standards were to be used for formulating specific discharge limitations.²² However, not only were few states setting specific water quality standards, but many problems arose when states implemented these standards—including problems of determining when a discharge violated an established standard, and with identifying ways to allocate effluent limitations among different polluters. Moreover, industry commonly pressured states to reclassify their waterways to allow a greater pollutant load.²³

¹⁷ Water Pollution Control Act of 1948, ch. 758, 62 Stat. 1165 (1948) (current version at 33 U.S.C. §§ 1251–1387 (1994)).

¹⁸ See *id.* at § 5.

¹⁹ See Pub. L. No. 89–234, 79 Stat. 903 (1965) (current version at 33 U.S.C. § 1313); see also Theodore L. Garrett, *Overview of the Clean Water Act*, in CLEAN WATER ACT HANDBOOK 5 (Parthenia B. Evans ed., 1994) [hereinafter CWA HANDBOOK].

²⁰ See WATER LAW, *supra* note 9, at 168–70.

²¹ See J. GORDON ARBUCKLE ET AL., ENVIRONMENTAL LAW HANDBOOK 66 (11th ed. 1991).

²² See *id.*

²³ See *id.*

B. 1972 Amendments to FWPCA: the Clean Water Act

The 1972 enactment of the CWA altered the course of protecting the nation's waterways from a reliance on water quality standards to the introduction of technology-based effluent limitations.²⁴ This addition of discharge limitations to the prior, exclusive reliance on water quality standards reflected Congress's frustration with the failure of FWPCA and the 1965 Water Quality Act to result in cleaner waterways.²⁵

To address the weaknesses of the prior legislation, the 1972 amendments, although technically retaining water quality standards as part of the enforcement mechanism, elevated technology-based discharge standards as the principal control mechanism for fighting water pollution.²⁶ However, the CWA was not silent on nonpoint source pollution, as it included two specific programs enacted to deal with polluted runoff.²⁷

1. Section 208

Although the CWA's primary goal was regulation of point sources, it also addressed nonpoint source pollution.²⁸ Section 208 of the CWA required states to develop "area-wide waste treatment management" (AWTM) plans to identify nonpoint source pollution.²⁹ In addition, section 208 required states to establish or designate an agency or other organization to develop and implement these AWTM plans.³⁰ These agencies would then develop procedures and methods to reduce and control nonpoint source pollution flowing from agricultural and other sources.³¹ Section 208 also provided federal funding to assist the states in the designation process.³²

Implementation of section 208 was problematic for several reasons.³³ States had virtually unlimited discretion in drafting AWTM

²⁴ See WATER LAW, *supra* note 9, at 170.

²⁵ See *id.*

²⁶ See *id.*

²⁷ 33 U.S.C. §§ 1288, 1329.

²⁸ See generally Serena P. Wiltshire, *Nonpoint Source Pollution Control*, in CWA HANDBOOK, *supra* note 19, at 245.

²⁹ 33 U.S.C. § 1288(b)(1)(A).

³⁰ *Id.* § 1288(b)(1)(B).

³¹ *Id.* § 1288(b)(2)(F).

³² See *id.* § 1288(f).

³³ See Adler, *supra* note 14, at 1043.

plans, and if a state refused to establish a plan, the Environmental Protection Agency (EPA) did not have the authority to impose its own plan.³⁴ In addition, not only was there limited guidance from EPA as to how to design the AWTM plans, but Congress also failed to provide sufficient funds for the grants program.³⁵ The grant funding eventually was discontinued in 1981.³⁶ Thus, for a number of reasons, the section 208 program failed to make any significant progress in limiting nonpoint source pollution.³⁷

2. Water Quality Act of 1987 & Section 319 of the CWA

Congress attempted to fix the problems raised by the limitations of section 208 in the Water Quality Act of 1987 by adding section 319.³⁸ Although section 319 required stricter Best Management Practices (BMPs) for nonpoint source pollution, as well as tighter standards by which EPA evaluated and approved state plans, the states' decisions to create plans were still voluntary.³⁹ EPA continues to lack the authority to require the states to take any affirmative action to limit nonpoint source pollution.⁴⁰

3. Section 401 & Section 303: State Water Quality Standards

a. Section 401

Section 401, the "sleeping giant" of the CWA, may become more prominent in fighting nonpoint source pollution.⁴¹ Section 401 requires

³⁴ See Robert D. Fentress, Comment, *Nonpoint Source Pollution, Groundwater, and the 1987 Water Quality Act: Section 208 Revisited?*, 19 ENVTL. L. 807, 818 (1989).

³⁵ See Adler, *supra* note 14, at 1044.

³⁶ See *id.*

³⁷ See *id.* at 1045. Although the statute remains on the books, its practical application has been limited by section 319 of the Water Quality Act of 1987. See *id.* at 1044; 33 U.S.C. § 1329.

³⁸ See Water Quality Act of 1987 § 319, (codified at 33 U.S.C. § 1329).

³⁹ See David Zaring, Comment, *Agriculture, Nonpoint Source Pollution, and Regulatory Control: The Clean Water Act's Bleak Present and Future*, 20 HARV. ENVTL. L. REV. 515, 527 (1996).

⁴⁰ See *id.* Like section 208, the failure to require states to submit nonpoint source management plans is fatal to section 319's effectiveness. See Fentress, *supra* note 34, at 825-27. A state may avail itself of the grant money by developing a plan under section 319. See 33 U.S.C. § 1329(h). Although the stricter reporting requirements under section 319 that require "satisfactory progress" in order to continue receiving funds are a stronger incentive to develop a good plan, EPA has not chosen to set a high standard for the continued receipt of funding. See Adler, *supra* note 14, at 1045 n.427.

⁴¹ See Katherine P. Ransel, *The Sleeping Giant Awakens: PUD No. 1 of Jefferson County v.*

that an applicant for any federally permitted or licensed activity that might result in a discharge into navigable waters must obtain a section 401 certificate from the state in which the discharge is likely to occur.⁴² States will grant certification under section 401 if and when the proposed activity complies with the state's water quality standards.⁴³ As part of the permit process, states may grant or deny the certificate, waive section 401 certification, or set conditions that become part of the federal permit.⁴⁴ So far, states have not actively invoked section 401 to enforce water quality permit conditions.⁴⁵ Even federal agencies have largely ignored the provision.⁴⁶

In order for states to exercise certification authority under section 401, two initial threshold tests must be met.⁴⁷ First, there must exist an application for a federally permitted activity, and second, the proposed activity must be likely to result in a discharge into navigable waters.⁴⁸

With regard to the first threshold test, three federally permitted activities are clearly subject to section 401 certification: National Pollutant Discharge Elimination System (NPDES) permits, permits for discharges of dredge and fill into wetlands under section 404, and licenses for operating hydroelectric facilities issued by the Federal Energy Regulatory Commission (FERC).⁴⁹ Activities that may require section 401 certification include permits for activities likely to affect navigation under sections 9 and 10 of the Rivers and Harbors Act (RHA), including the construction of dams and dikes in navigable waters.⁵⁰ In addition, given that section 401 covers "*any* activity that may result in *any* discharge,"⁵¹ any federally permitted activity, including special use permits issued by the Forest Service for activities

Washington Department of Ecology, 25 ENVTL. L. 255, 268-69 (1995). "Sleeping Giant" is Ms. Ransel's term for section 401. For a general discussion of section 401 prior to the Supreme Court's opinion in *Jefferson County*, see generally Katherine P. Ransel & Erik Meyers, *State Water Quality and Wetlands Protection: A Call to Awaken the Sleeping Giant*, 7 VA. J. NAT. RESOURCES L. 339 (1988).

⁴² 33 U.S.C. § 1341(a)(1).

⁴³ See *id.*

⁴⁴ *Id.* § 1341(a)(2).

⁴⁵ See Deborah L. Donahue, *The Untapped Power of the Clean Water Act Section 401*, 23 ECOLOGY L.Q. 201, 204 (1996).

⁴⁶ See *id.*

⁴⁷ 33 U.S.C. § 1341(a)(1).

⁴⁸ *Id.*

⁴⁹ See Donahue, *supra* note 45, at 219-20.

⁵⁰ See *id.* at 221.

⁵¹ 33 U.S.C. § 1341(a)(1).

conducted in national forests, special land use permits issued by the Bureau of Land Management, and incidental take permits under the Endangered Species Act, may require state certification.⁵²

With regard to the second threshold test, state certification under section 401 requires that the proposed activity is likely to result in a "discharge."⁵³ Discharge is defined as any addition of dredged material, sewage, garbage, or other waste material from any point source into navigable waters.⁵⁴ Therefore, the scope of this requirement clearly includes activities that are likely to discharge any of the wastes specified in the definition through any traditional point source.⁵⁵ Although the definition is explicit only with regard to point source pollution, some courts and commentators have suggested that because the definition of discharge "includes," but is not limited to, the list of point source pollutants, nonpoint sources of pollution may also be covered by section 401.⁵⁶

b. *Section 303: State Water Quality Standards*

States ground their section 401 authority in the water quality standards they are authorized to set by section 303 of the CWA.⁵⁷ After the 1972 amendments, states that had not yet established acceptable water quality standards for navigable waterways were required to do so within 180 days of the Act's passage.⁵⁸ Section 303 authorizes states to set these standards based on three considerations.⁵⁹ First, states must establish the designated use of the waterway; second, states must establish specific criteria to protect the designated use; and third, states must develop criteria to prevent further degradation of the waterway.⁶⁰ The EPA then accepts the state's standards if they are consistent with the standards of the CWA.⁶¹ In the alternative,

⁵² See Donahue, *supra* note 45, at 226-28. Donahue admits in a footnote of this section that her list of other possible federal permits has not been subject to extensive scrutiny. See *id.* at 226 n.135.

⁵³ 33 U.S.C. § 1341(a)(1).

⁵⁴ *Id.* § 1362(12).

⁵⁵ See Donahue, *supra* note 45, at 226.

⁵⁶ See *id.* at 230.

⁵⁷ See Clean Water Act § 2, 33 U.S.C. § 1313 (1994).

⁵⁸ *Id.* § 1313(a)(3)(A).

⁵⁹ *Id.* § 1313(c)(2)(A).

⁶⁰ See *id.*

⁶¹ *Id.* § 1313(a)(3)(B),(C).

EPA may promulgate its own standards if a state fails to set acceptable standards.⁶²

II. RECENT CASE LAW ON SECTION 401

Until 1994, the scope of the states' power under section 401 was uncertain. However, two cases from 1994 and 1995 expanded the power of states to condition or deny federal permits if the proposed activity threatened state water quality standards.⁶³ These decisions suggest a trend in allowing states, and in some instances citizens,⁶⁴ to deny or condition certain federal permits because of minimum stream flows⁶⁵ or combined sewer overflows.⁶⁶ In addition, one district court, eventually overturned on appeal, even allowed a citizen group to prevent the issuance of a federal grazing permit because of the likely effect of nonpoint source pollution on water quality.⁶⁷

A. *The United States Supreme Court's Decision in PUD No. 1 of Jefferson County v. Washington Department of Ecology*

In *PUD No. 1 of Jefferson County v. Washington Department of Ecology (Jefferson County)*, the United States Supreme Court held that states have the authority to impose conditions on federal hydroelectric permits granted by the Federal Energy Regulatory Commission (FERC) to ensure that the operation of a proposed dam will not adversely affect state water quality.⁶⁸ Specifically, the Court held that, as conditions of section 401 certification, states may impose minimum stream flows and other broad, narrative criteria to enforce water quality standards.⁶⁹

Two aspects of the holding in *Jefferson County* are important for purposes of understanding the effect of the decision on future enforcement of nonpoint source pollution.⁷⁰ First, the Court held that 401 applied to any *applicant* whose federally permitted activity may re-

⁶² 33 U.S.C. § 1313(a)(3)(C).

⁶³ See generally *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700 (1994); *Northwest Env'tl. Advocates v. Portland*, 56 F.3d 979 (9th Cir. 1995).

⁶⁴ See *Northwest Env'tl. Advocates*, 56 F.3d at 987.

⁶⁵ See *Jefferson County*, 511 U.S. at 714.

⁶⁶ See *Northwest Env'tl. Advocates*, 56 F.3d at 986.

⁶⁷ See *Oregon Natural Desert Ass'n v. Thomas*, 940 F. Supp. 1534, 1540 (D. Or. 1996).

⁶⁸ See *Jefferson County*, 511 U.S. at 711.

⁶⁹ See *id.* at 715-16.

⁷⁰ See *id.* at 710, 721. In addition to the CWA issues, the Court rejected the claim that FERC has exclusive jurisdiction over hydropower licensing. See *id.* at 721.

sult in a discharge into navigable waters.⁷¹ Therefore, states could add conditions to federal permits for *activities* that may result in a discharge, and not merely conditions on point source discharge permits.⁷² The Court's language clearly stated that section 401 compliance refers to the *applicant*, not the discharge.⁷³ The Court's reasoning was derived, in part, from the EPA regulations that specifically required states to confirm that applicants conduct the permitted activity in a manner that protects water quality.⁷⁴ This reasoning greatly expanded the power of the states under section 401 by allowing them to veto any federally permitted activity that might result in a discharge when the discharge is likely to threaten water quality.⁷⁵ In so reasoning, the Court also held that because states could regulate activities as well as discharges, section 401 might apply to nonpoint source pollution.⁷⁶

The second important aspect of *Jefferson County* was the Court's conclusion that section 401 certification need not be limited to water quality standards that have been translated into specific, numerical criteria.⁷⁷ The Court held that water quality standards consist of two components: the designated use, and any criteria to preserve that designated use.⁷⁸ Therefore, any proposed activity that may result in a discharge into navigable waters must comply with water quality standards described both by applicable numerical criteria and the designated use.⁷⁹ The Court further expanded this holding by stating

⁷¹ See *id.* at 711.

⁷² See *id.* Section 401(a) specifically states that the "discharge" must comply with the state water quality standards. 33 U.S.C. § 1341(a)(1) (1994). However, the Court based its reasoning on the language in section 401(d), which allows a state to condition approval to assure that any "applicant" complies with water quality standards. *Id.* § 1341(d).

⁷³ See *Jefferson County*, 511 U.S. at 711.

⁷⁴ See *id.*

⁷⁵ See *id.* at 711–12.

⁷⁶ See Ransel, *supra* note 41, at 269. Although the Court did not address this issue head on, the Court implicitly appeared to include the application of section 401 to nonpoint source pollution. See *Jefferson County*, 511 U.S. at 709–11; Donahue, *supra* note 45, at 210. The two "discharges" at issue in *Jefferson County* were the release of dredge and fill material during construction and the diversion of water from the Dosewallips River. See 511 U.S. at 708–09. Although the first discharge is definitely a point source, the technical term for the diversion is "hydromodification," a type of *nonpoint* source pollution expressly identified in the codified statute. See 33 U.S.C. § 1314(f)(2)(F). The diversion in *Jefferson County* was considered a nonpoint source because it did not contain pollutants. See, e.g., National Wildlife Fed'n v. Gorsuch, 693 F.2d 156, 175 (1982). Therefore, in *Jefferson County*, the Court arguably applied section 401 certification to a nonpoint source. See Donahue, *supra* note 45, at 238.

⁷⁷ See *Jefferson County*, 511 U.S. at 714.

⁷⁸ See *id.*

⁷⁹ See *id.*

that a state may use "broad, narrative" criteria, including maintaining the "aesthetics" of the waterway, to describe the designated use.⁸⁰ The Court rejected the defendant's argument that allowing enforcement of narrative water quality standards rendered the numerical criteria requirement irrelevant.⁸¹ The Court reasoned that requiring the states to translate every water quality standard into numerical criteria would place too great a burden on the states.⁸² The Court concluded that it was "loath to attribute" this requirement to Congress without some specific textual support in the CWA.⁸³

In sum, under section 401, states may use numerical criteria, narrative statements regarding designated use, or an antidegradation policy to condition or deny federal permits for any activity that may result in a discharge into a navigable waterway.⁸⁴

The Court in *Jefferson County* did not decide whether citizen groups could use section 401. However, the United States Court of Appeals for the Ninth Circuit eventually addressed the issue of citizen authority to enforce water quality standards in *Northwest Environmental Advocates v. Portland (NEA)*.⁸⁵

B. *Citizen Suits and Northwest Environmental Advocates v. Portland*

Northwest Environmental Advocates v. Portland involved a dispute regarding combined sewer overflows (CSOs) in the city of Portland, Oregon.⁸⁶ Portland had obtained an extension of its 1984 NPDES permit because of ongoing negotiations with EPA over Portland's combined sewer system (CSS).⁸⁷ In order to finalize the new permit, Portland entered into negotiations with Oregon's Department of Environmental Quality (DEQ) regarding the eventual closing of the city's CSS.⁸⁸ Before the EPA issued the new NPDES permit, a group

⁸⁰ See *id.* at 716. The Court also held that states can base section 401 certification on their antidegradation policy. See *id.* at 718-19.

⁸¹ See *id.* at 716.

⁸² See *Jefferson County*, 511 U.S. at 718.

⁸³ See *id.*

⁸⁴ See *id.* at 723.

⁸⁵ 56 F.3d 979 (9th Cir. 1995).

⁸⁶ See *id.* at 980. CSO refers to the network of underground pipes that carry both wastewater and stormwater collected by street drains. See *id.* In periods of wet weather, the amount of water in the system often exceeds the capacity of the wastewater treatment facility and is therefore directly released, untreated, through the CSO "outfall" pipes. See *id.* The cost of upgrading the city of Portland's system to completely eliminate the CSOs was estimated between \$500 million and \$1.2 billion. See *id.* at 981.

⁸⁷ See *id.* at 982.

⁸⁸ See *id.*

of environmental organizations sued the city under the citizen suit provision of the CWA alleging that because the CSOs were not covered by the 1984 NPDES permit, Portland was discharging a pollutant without a permit.⁸⁹ The plaintiffs argued further that even if the CSOs were covered by the 1984 permit, they still violated Oregon's state water quality standards, and were therefore in violation of Portland's permit.⁹⁰

In August of 1991, four months after the plaintiffs filed suit, Portland entered into a settlement with DEQ.⁹¹ Although the settlement brought Portland's CSOs under the new permit, Portland agreed to replace the CSO system within twenty years.⁹²

Regardless of the settlement, the plaintiffs maintained their allegations that the state of Oregon was not enforcing its water quality standards.⁹³ On cross motions for summary judgment, the district court in the *NEA* case ruled on two issues: first, that the 1984 NPDES permit covered Portland's CSOs, and second, that the CWA did not confer jurisdiction on the federal courts to hear claims by citizens to enforce water quality standards.⁹⁴ The district court held primarily that because the water quality standards had not been translated into numerical effluent limitations, the plaintiffs could not utilize the citizen suit provision to enforce "an effluent standard or limitation under this chapter."⁹⁵

The Ninth Circuit upheld the district court's ruling that the 1984 permit covered Portland's CSOs.⁹⁶ However, it reversed the district court's ruling regarding the federal court's jurisdiction to hear the citizen suit.⁹⁷ In so deciding, the Ninth Circuit first established that conformity with the state's water quality standards was a condition of the final, 1991 NPDES permit.⁹⁸ The court acknowledged that al-

⁸⁹ See *id.*

⁹⁰ See *Northwest Env'tl. Advocates*, 56 F.3d at 982.

⁹¹ See *id.*

⁹² See *id.* at 982. This case demonstrates how states have failed to rigorously set and enforce water quality standards under section 401. In this case, even though Portland received its section 401 certification from the state, it nevertheless faced a challenge by a citizen group that the state's certification process was deficient.

⁹³ See *id.*

⁹⁴ See *Northwest Env'tl. Advocates v. Portland*, 1991 U.S. Dist. LEXIS 19157, at *18 (D. Or. 1991).

⁹⁵ See *id.* at *14.

⁹⁶ See *Northwest Env'tl. Advocates*, 56 F.3d at 983.

⁹⁷ See *id.* at 990.

⁹⁸ See *id.* at 985. The exact language was: "notwithstanding the effluent limitations established

though the water quality standards had not been translated into effluent limitations, such a process was not necessary for the condition to become enforceable by citizens under section 505 of the Act.⁹⁹ The court further noted that the text of section 505 allowed citizens to sue not merely to enforce effluent limitations, but also to enforce "a permit or condition thereof."¹⁰⁰ Because compliance with water quality standards was a condition of the 1991 permit, and the plaintiffs were thus seeking to enforce a "condition thereof," the court concluded that it had jurisdiction to hear the claim.¹⁰¹

The court then rejected the defendant's assertion that because the 1972 CWA amendments replaced water quality standards with effluent limitations as the primary means of regulating water pollution, section 505 of the Act no longer allowed for the enforcement of water quality standards.¹⁰² The court reasoned that Congress intended only to improve water pollution enforcement with the addition of effluent limitations in the 1972 amendments, not to replace the prior system of water quality standards.¹⁰³ In addition, even though the 1972 amendments were the result of Congress's frustration with the failure of water quality standards to clean up the nation's waterways, the court found no evidence that Congress intended that only water quality standards translated into effluent limitations were enforceable.¹⁰⁴ The court concluded that Congress intended the citizen suit provision to grant broad authority for citizens to prevent water pollution.¹⁰⁵

The Ninth Circuit relied heavily on the Supreme Court's decision in *Jefferson County*.¹⁰⁶ Because the Supreme Court had held that

by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted (by state law)." *Id.*

⁹⁹ See *id.* at 986.

¹⁰⁰ See *id.*

¹⁰¹ See *Northwest Env'tl. Advocates*, 56 F.3d at 986.

¹⁰² See *id.*

¹⁰³ See *id.*

¹⁰⁴ See *id.*

¹⁰⁵ See *id.* at 987.

¹⁰⁶ See PUD No. 1 *Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700 (1994). In fact, the Ninth Circuit originally upheld the district court on the citizen suit claim. See *Northwest Env'tl. Advocates v. Portland*, 11 F.3d 900 (9th Cir. 1993). However, while a motion by the plaintiffs for a rehearing *en banc* was pending, the Supreme Court decided *Jefferson County*. Afterwards, the Ninth Circuit stated that because the decision in *Jefferson County* "cast into considerable doubt our holding" in the initial appeal, their opinion was to be vacated and replaced with this opinion that granted jurisdiction to hear the citizen suit. See *Northwest Env'tl. Advocates*, 56 F.3d at 981.

states could enforce broad, narrative criteria, and not just numerical effluent limitations in water quality standards, the Ninth Circuit in *NEA* similarly held that citizens could enforce water quality standards that had not been translated into numerical effluent standards.¹⁰⁷

The Ninth Circuit, however, took *Jefferson County* one step further.¹⁰⁸ It held that citizen groups, as well as states, could enforce broad, narrative water quality standards.¹⁰⁹ The court's reasoning was twofold: first, although the citizen suit provision involved enforcement of section 402 conditions, as opposed to the section 401 conditions in *Jefferson County*, both 401 and 402 required compliance with section 301, which incorporated water quality standards.¹¹⁰ Therefore both the citizen suit provision under section 505 and the state's authority under section 401 granted citizens the authority to sue to enforce water quality standards.¹¹¹ Second, the Ninth Circuit found no statutory language in either the CWA, its legislative history, or EPA's regulations that restricted citizens from enforcing any condition that states could themselves enforce.¹¹² The court then repeated its reasoning that Congress intended citizens to have broad enforcement authority under the Act.¹¹³

The *Jefferson County* and *NEA* decisions combine to allow states to condition or deny federal permits on the basis of broad, narrative criteria contained in water quality standards.¹¹⁴ If a state fails to enforce its authority, and compliance with the state's water quality standards are a condition of the federal permit, citizens may sue to enforce the standards if the state fails to do so.¹¹⁵ Neither *Jefferson County* nor *NEA* decided whether states or citizens could use water quality standards to impose restrictions on activities likely to cause nonpoint source pollution. However, it is reasonable to suggest that

¹⁰⁷ See *id.* at 987-88.

¹⁰⁸ See *id.*

¹⁰⁹ See *id.* at 988. For criticism of this holding, and concerns about its practical use, see *infra* Part III.

¹¹⁰ See *id.*

¹¹¹ See *Northwest Envtl. Advocates*, 56 F.3d at 988.

¹¹² See *id.*

¹¹³ See *id.*

¹¹⁴ See *PUD No. 1 Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700, 713-14 (1994); *Northwest Envtl. Advocates*, 56 F.3d at 985.

¹¹⁵ See *Northwest Envtl. Advocates*, 56 F.3d at 988. The obvious limitation here is that if the state fails to include compliance with water quality standards in the permit, i.e. if it fails to exercise its section 401 authority, citizens will not be able to sue to enforce water quality standards. See *id.* Of course, this section 401 process is conducted at the state level, where citizens participate and can bring pressure on the state to condition federal permits to include compliance with water quality standards.

if states and citizens are able to condition federal permits to protect water quality standards, this power would be illusory if section 401 only applied to point source pollution, given the substantial impact of nonpoint source pollution on water quality.

The viability of using section 401 to limit nonpoint source pollution was subsequently addressed by the Oregon federal district court and the Ninth Circuit Court of Appeals.¹¹⁶

C. Section 401 and Nonpoint Source Pollution: Two Views

Environmental advocates had a short-lived victory when a federal district court held in *Oregon Natural Desert Association v. Thomas* that section 401 could be used to condition federal permits for activities likely to result in nonpoint source pollution.¹¹⁷ This decision was subsequently overturned by the Ninth Circuit Court of Appeals in *Oregon Natural Desert Association v. Dombeck*.¹¹⁸ Although *Thomas* was eventually reversed by *Dombeck*, other circuits are free to decide otherwise.¹¹⁹ In addition, a discussion of both *Thomas* and *Dombeck* is helpful to understand the possibilities of, and limitations to, using section 401 to restrict nonpoint source pollution under the Clean Water Act.

1. The Short-Lived Application of Section 401 to Nonpoint Source Pollution: The Oregon Federal District Court in *Thomas*

The district court in *Thomas* discussed two issues: first, whether the term "discharge" in section 401 of the CWA included nonpoint source pollution, and second, whether citizens could invoke the citizen suit provision to enforce water quality standards before a state took action to deny or condition a federal permit.¹²⁰

The petitioners in *Thomas* were a collection of environmental groups who claimed under the citizen suit provision of the CWA that the United States Forest Service should require applicants for federal grazing permits to apply for section 401 certification from the state in which the grazing would occur.¹²¹ Petitioners asserted that this permitting process would ensure that grazing would not adversely affect

¹¹⁶ See *Oregon Natural Desert Ass'n v. Dombeck*, 151 F.3d 945 (9th Cir. 1998); *Oregon Natural Desert Ass'n v. Thomas*, 940 F. Supp. 1534 (D. Or. 1996).

¹¹⁷ See *Thomas*, 940 F. Supp. at 1541.

¹¹⁸ 151 F.3d at 946.

¹¹⁹ See *infra* notes 151–56 and accompanying text.

¹²⁰ See *id.* at 1536–37; 33 U.S.C. § 1341 (1994).

¹²¹ See *Thomas*, 940 F. Supp. at 1537.

state water quality standards.¹²² The Forest Service countered with two defenses. First, it claimed that the federal court did not have jurisdiction to review the citizen group's claim because section 505 of the Act did not allow citizens to sue to enforce water quality standards.¹²³ Second, the Forest Service claimed that the term "discharge" in section 401 included only point source pollution, or nonpoint source pollution with conveyances; therefore the CWA did not require section 401 certification for a federal grazing permit.¹²⁴

After finding that the plaintiffs had standing to sue,¹²⁵ the court firmly rejected the Forest Service's argument that the court did not have jurisdiction to hear the CWA citizen suit.¹²⁶ In so ruling, the court cited the holding in *NEA*, where citizens were allowed to enforce permit conditions through the citizen suit provision using either effluent limitations or *water quality standards*.¹²⁷

The court then found for the plaintiff environmental organizations on the nonpoint source claim.¹²⁸ In evaluating the term "discharge," the court considered whether this term included only point source pollution.¹²⁹ The court first stated that the term discharge "include[d] a discharge of a pollutant, and a discharge of pollutants," and furthermore that the terms "discharge of a pollutant" and "discharge of pollutants" meant "any addition of any pollutant to navigable waters from any point source."¹³⁰ The court noted that the Forest Service argued in its briefs that the definition of these terms in section 1362(12) specified point sources.¹³¹ The court disagreed with this assertion, explaining that the word "includes" in the initial definition of discharge allowed for additional, unstated meanings.¹³² Therefore, the court held that the definition of discharge "includes," but is not limited to, point sources.¹³³

¹²² See *id.*

¹²³ See *id.* at 1540.

¹²⁴ See *id.*

¹²⁵ See *id.* at 1538.

¹²⁶ See *Thomas*, 940 F. Supp. at 1538.

¹²⁷ See *id.*

¹²⁸ See *id.* at 1541.

¹²⁹ See *id.* at 1539.

¹³⁰ See *id.* at 1540; 33 U.S.C. § 1362(12), (16) (1994).

¹³¹ See *Thomas*, 940 F. Supp. at 1540.

¹³² See *id.*

¹³³ See *id.* Before continuing its discussion of the nonpoint source issue, the court dismissed the Forest Service's assertion that, as a federal agency, its interpretation of the term "discharge" was entitled to deference by the court. See *id.* The court pointed out that the EPA, not the Forest Service, is the agency responsible for interpreting terms in the CWA, and therefore the Forest Service's interpretation of the term carries no particular weight. See *id.*

Finally, the court rejected the Forest Service's argument that the 1972 Amendments to the CWA show the intent of Congress to replace enforcement of state water quality standards with the imposition of effluent standards.¹³⁴ Similar to the Ninth Circuit's decision in *NEA*, the court held that the 1972 Amendments to the CWA merely added effluent limitations to assist with the enforcement of water pollution, and did not replace the existing use of water quality standards.¹³⁵ The court further held that there was no evidence in the legislative history of the 1970 Act that Congress intended to limit water pollution enforcement to point sources, and moreover that the plain language of the term "discharge" in the 1972 Amendments was also not limited to point sources.¹³⁶ The court concluded that section 401 of the CWA applied to all federally permitted activities that may result in a discharge, including nonpoint sources that are likely to have an effect on state water quality standards.¹³⁷

2. The Ninth Circuit Reverses: The *Dombeck* Decision

On appeal, the Ninth Circuit specifically addressed the question of whether the certification requirement of section 401 includes releases from nonpoint source pollution.¹³⁸ First, the Ninth Circuit agreed with the district court that the citizens had standing to sue, and that the citizen suit provision allowed the group to sue the Forest Service for not issuing a section 401 certificate.¹³⁹

However, the circuit court disagreed that section 401 certification applied to nonpoint source pollution.¹⁴⁰ The court noted that point source and nonpoint source pollution are regulated under different sections of the CWA.¹⁴¹ The court cited sections 208 and 319, grant programs that encourage states to develop nonpoint source pollution abatement plans.¹⁴² Thus, regulation of nonpoint source pollution is limited to the "threat and promise" of federal grants, not the requirements of section 401.¹⁴³

¹³⁴ See *id.* at 1541.

¹³⁵ See *id.* at 1540-41.

¹³⁶ See *Thomas*, 940 F. Supp. at 1541.

¹³⁷ See *id.*

¹³⁸ See *Oregon Natural Desert Ass'n v. Dombeck*, 151 F.3d 945, 946 (9th Cir. 1998).

¹³⁹ See *id.* at 946-47.

¹⁴⁰ See *id.* at 948.

¹⁴¹ See *id.* at 949.

¹⁴² See *id.*

¹⁴³ See *Dombeck*, 151 F.3d at 949.

The Ninth Circuit rejected the district court's reasoning that the term "discharge" was not limited to point source pollution.¹⁴⁴ Citing the District of Columbia Circuit in *National Wildlife Federation v. Gorsuch*,¹⁴⁵ the court in *Dombeck* agreed that the term discharge had multiple meanings; however, the court disagreed with the district court that those meanings included point and nonpoint source pollution.¹⁴⁶ Instead, the court held that the multiple meanings included only polluting and nonpolluting point sources—nonpoint source pollution was not a "discharge" under section 401.¹⁴⁷

The court continued that the term discharge differs from the term "runoff," which is used in the CWA to discuss nonpoint source pollution and urban wastewater plans.¹⁴⁸ Other sections of the CWA specifically regulate activities likely to result in runoff that adversely affects water quality.¹⁴⁹ Thus, if Congress had intended for section 401 to apply to nonpoint source pollution, Congress could have so designated.¹⁵⁰

What is troubling about the *Dombeck* decision is the court's underlying reasoning regarding the relevance of the 1972 Amendments to the CWA.¹⁵¹ In support of its decision, the court concluded that the change in enforcement from water quality standards to point source effluent limitations signaled the intention of Congress to focus on point source limits and leave the regulation of nonpoint source pollution to grants and other "threat and promise" programs.¹⁵² This reasoning is directly contrary to the Ninth Circuit's prior reasoning in *NEA*, where the court held that Congress only intended to improve upon water pollution enforcement with the addition of point source limits, not to replace the enforcement of water quality standards.¹⁵³ In *NEA*, the Ninth Circuit explicitly stated that there was no evidence that Congress intended the 1972 Amendments to eliminate consideration of water quality standards.¹⁵⁴

¹⁴⁴ See *id.*

¹⁴⁵ 693 F.2d 156 (D.C. Cir. 1982).

¹⁴⁶ See *Dombeck*, 151 F.3d at 950–51.

¹⁴⁷ See *id.*

¹⁴⁸ See 42 U.S.C. §§ 1288, 1314(f) (1994).

¹⁴⁹ See *id.* at § 1323(a).

¹⁵⁰ See *Dombeck*, 151 F.3d at 950.

¹⁵¹ See *id.* at 948–49.

¹⁵² See *id.* at 949.

¹⁵³ See *Northwest Env'tl. Advocates v. Portland*, 56 F.3d 979, 986 (9th Cir. 1995).

¹⁵⁴ See *id.*

Therefore, although it is true that in the Ninth Circuit section 401 may not be used to regulate nonpoint source pollution, other circuit courts should give pause before adopting the reasoning in *Dombeck*. If, as the Ninth Circuit held in *NEA*, maintaining compliance with water quality standards is still a concern of the CWA, then the inextricable link between nonpoint source pollution and water quality standards must be acknowledged.¹⁵⁵ If Congress meant to abandon enforcement of water quality standards, as the Ninth Circuit suggested in *Dombeck*, then further regulation of nonpoint source pollution under the CWA is less likely.¹⁵⁶ Further debate by the other circuits may help to clarify whether nonpoint source pollution may be regulated under section 401.

III. FUTURE OF NONPOINT SOURCE POLLUTION ENFORCEMENT UNDER THE CLEAN WATER ACT

Although a complete analysis of the effectiveness of the CWA in stopping nonpoint source pollution is beyond the scope of this Comment, several observations suggest that the CWA, as currently written and enforced, is not capable of preventing nonpoint source pollution from fouling our waterways. These limitations lead to this Comment's conclusion that, as an alternative to the CWA, watershed-based management offers a better chance at limiting the damaging effect of nonpoint source pollution.

Several factors contribute to this assessment. First, the track record of the CWA in preventing nonpoint source pollution is poor.¹⁵⁷ Second, political, social, and institutional limitations will prevent EPA and the states from using the existing framework of the CWA to improve nonpoint source pollution abatement.¹⁵⁸ Third, these political and institutional limitations will also restrict any use of *Jefferson County* and *NEA* to convince another circuit to allow section 401 to be used to regulate nonpoint source pollution.¹⁵⁹ Finally, limitations in the citizen suit provision of the CWA remain to prevent citizens from

¹⁵⁵ See *id.*

¹⁵⁶ See *Dombeck*, 151 F.3d at 948-49.

¹⁵⁷ See *supra* Part I.B.1-2.

¹⁵⁸ See generally Victor B. Flatt, *A Dirty River Runs Through It (The Failure of Enforcement in the Clean Water Act)*, 25 B.C. ENVTL. AFF. L. REV. 1 (1997).

¹⁵⁹ See, e.g., Diarmuid F. O'Scannlain, *Current Trends in Judicial Review of Environmental Agency Action*, 21 ENVTL. L. 1 (1997).

forcing states and EPA to take additional steps to combat nonpoint source pollution.¹⁶⁰

A. *Record of the CWA in Stopping Nonpoint Source Pollution*

Many commentators identify the CWA's failure to address nonpoint source pollution adequately as the greatest weakness of the Act.¹⁶¹ Because the statute relegates nonpoint source pollution to secondary consideration at a time in which nonpoint source pollution is becoming the primary pollution source, the record of the CWA can only get worse.¹⁶²

1. Nonpoint Programs

Both the section 319 nonpoint source pollution grant program and its predecessor, section 208, suffer from limited funding and lack of state participation.¹⁶³ The incentives for states under section 319 have been limited, as Congress appropriated less than \$50 million per year from 1990 to 1993.¹⁶⁴ Congress may doubt state officials' confidence in the program.¹⁶⁵ This may partially explain the deficiencies in funding.¹⁶⁶

To complement the lack of incentive for states to initiate a section 319 program, EPA has no authority to force states to adopt nonpoint source pollution plans.¹⁶⁷ If states fail to adopt a plan, EPA may submit its own plan to Congress and then work directly with local organizations conducting water pollution control programs.¹⁶⁸ However, the federal government has been reluctant to impose nonpoint source pollution requirements without state participation because of the political costs of imposing new regulations on powerful special interest groups.¹⁶⁹ Consequently, both the states and EPA have little incentive to promote tough limitations to reduce nonpoint source pollution under section 319.¹⁷⁰

¹⁶⁰ See, e.g., Healy, *supra* note 16.

¹⁶¹ See Anderson, *supra* note 7, at 399.

¹⁶² See *id.*

¹⁶³ See Adler, *supra* note 14, at 1044.

¹⁶⁴ See Zaring, *supra* note 39, at 527.

¹⁶⁵ See *id.*

¹⁶⁶ See *id.*

¹⁶⁷ See *id.*

¹⁶⁸ See *id.*

¹⁶⁹ See Zaring, *supra* note 39, at 527-28.

¹⁷⁰ See *id.*

Also, regarding the funds available for local groups and municipalities to conduct nonpoint source pollution abatement programs, the application process can take up to a year and a half.¹⁷¹ This delay is burdensome on local organizations who cannot normally wait long to be reimbursed for grant work.¹⁷²

2. Institutional Limitations

In addition to the problems associated with the substance of the text of the CWA, institutional limitations, such as lack of funding and enforcement zeal, characterize the CWA's attempts to deal with nonpoint source pollution.¹⁷³ Also, the record of the states in enforcing both point and nonpoint source limits still suffers from both political limitations and the incentive to weaken enforcement to attract new industrial development.¹⁷⁴

a. *Lack of Funding and Enforcement Zeal*

Even in the first decade following the passage of the 1972 amendments, EPA's enforcement record of the CWA was poor.¹⁷⁵ From 1977 to 1982, enforcement actions declined 73.1%.¹⁷⁶ This coincided with a drop of 25.5% in the number of permanent full-time personnel assigned to CWA enforcement.¹⁷⁷ This period of weak enforcement occurred during a time when a survey of 531 polluters from 1980 to 1982 showed that 82% of these sources had violated their permits at least one time.¹⁷⁸

However, EPA does not bear the entire blame—Congress intended that it was the state's primary responsibility to prevent water pollution, and lack of state enforcement is equally to blame for CWA

¹⁷¹ See Interview with Ed Himlan, Executive Director of the Massachusetts Watershed Coalition (MWC), Mar. 10, 1998. The MWC recently used section 319 money to fund an educational campaign entitled "H2Ome Check," which outlined steps for homeowners to reduce introducing pollution into surface and ground water supplies. See *id.* The campaign suggested the use of alternatives to harsh household chemicals, reducing the amount of chemical fertilizers and other lawn products, and conserving water use with low flow shower heads. See *id.*

¹⁷² See *id.*

¹⁷³ See Platt, *supra* note 158, at 4–5.

¹⁷⁴ See *id.* at 5–6.

¹⁷⁵ See William L. Andreen, *Beyond Words of Exhortation: The Congressional Prescription for Vigorous Federal Enforcement of the Clean Water Act*, 55 GEO. WASH. L. REV. 202, 204–05 (1987).

¹⁷⁶ See *id.* at 204.

¹⁷⁷ See *id.* at 205.

¹⁷⁸ See *id.* (citing U.S. GENERAL ACCOUNTING OFFICE, WASTEWATER DISCHARGERS ARE NOT COMPLYING WITH EPA POLLUTION CONTROL PERMITS 24 (1983)).

violations.¹⁷⁹ Under the CWA, states may petition EPA for the right to administer the NPDES permit program.¹⁸⁰ This state-federal partnership is intended to balance the need for uniform federal standards with flexibility for states to tailor discharge requirements to meet local conditions.¹⁸¹

Once states have the authority under their state programs to issue and enforce NPDES permits, EPA's oversight authority is limited.¹⁸² Any threat that EPA will revoke the states' authority is limited both by political pressures on EPA, and by the complex regulatory process that EPA must initiate to remove this authority from a state that fails to zealously enforce its responsibilities.¹⁸³ Also, funding limitations at EPA makes state administration of the NPDES permits very attractive, and thus removes EPA's incentive to accept the financial responsibility that accompanies CWA enforcement.¹⁸⁴

In addition, data to monitor whether the states are in compliance with the NPDES permitting program is incomplete, further clouding the issue.¹⁸⁵ Moreover, CWA enforcement often deals with sensitive local policy and political choices in which EPA is loath to involve itself.¹⁸⁶

b. *Second-Class Status of Water Quality Standards*

With regard to nonpoint source pollution, the picture is even bleaker. The problems of lack of enforcement zeal, limited funding, and state complacency in the face of CWA violations are exacerbated when applied to nonpoint source pollution. This is in part because the 1972 amendments changed the focus of the CWA from protecting water quality to imposing technology-based limitations on point source discharge.¹⁸⁷ Although Congress stated that the discharge limits were only to improve upon, not replace, water quality standards,

¹⁷⁹ See Flatt, *supra* note 158, at 15.

¹⁸⁰ 33 U.S.C. § 1251(b) (1994).

¹⁸¹ See Flatt, *supra* note 158, at 15.

¹⁸² See *id.* at 15-16.

¹⁸³ See *id.*

¹⁸⁴ See *id.*

¹⁸⁵ See William F. Pedersen, Jr., *Turning the Tide on Water Quality*, 15 *ECOLOGY L.Q.* 69, 96 (1988).

¹⁸⁶ See *id.* Overriding state decisions on issues of land use planning and economic development seriously strains the federal-state partnership in cleaning up water pollution. See *id.* at 72.

¹⁸⁷ See *id.* at 72-73.

in practice this change in the CWA makes enforcement of nonpoint source pollution more difficult.¹⁸⁸

Regardless of the enormous expenditures by industry and municipalities to meet NPDES permit requirements, overall water quality continues to decline because of pollution from nonpoint sources.¹⁸⁹ The second-class status of water quality in the CWA gives states no incentive to develop procedures to limit nonpoint source pollution.¹⁹⁰

Ignoring nonpoint source pollution can also erode support for the CWA as a whole.¹⁹¹ As traditional point source polluters realize that declining water quality is due to unregulated nonpoint sources, resistance to future tightening of technology-based limits is inevitable.¹⁹²

c. *Explicit Exemptions for Certain Nonpoint Sources*

Finally, certain nonpoint sources are explicitly exempt from the CWA.¹⁹³ For example, storm sewer discharges are exempt from NPDES permits, and in those cities where CSOs are a significant contributor to water pollution, EPA often allows wide latitude in setting a timetable for fixing CSO systems.¹⁹⁴

The 1987 amendments to the CWA added exemptions for runoff from mining and oil operations and small storm sewers.¹⁹⁵ The 1987 amendments also added an unqualified exemption from NPDES permits for agricultural stormwater runoff.¹⁹⁶ By removing agricultural stormwater runoff and limiting the enforcement of urban stormwater discharges, these exemptions to the CWA significantly interfere with efforts to improve water quality.¹⁹⁷

B. *Future Application of Case Law on Section 401*

If the structure of the CWA and the reluctance of EPA and the states to vigorously enforce water pollution have failed to reduce nonpoint source pollution, do the holdings of *Jefferson County, NEA*,

¹⁸⁸ See *id.* at 82.

¹⁸⁹ See *Farm, Urban Runoff, Municipal Sources Top Pollution Causes EPA Tells Congress*, [1993-1994] 24 Env't Rep. (BNA) 2228, 2228-29 (Apr. 29, 1994).

¹⁹⁰ See Pedersen, *supra* note 185, at 85.

¹⁹¹ See *id.* at 82-83.

¹⁹² See *id.*

¹⁹³ See *id.* at 91-92.

¹⁹⁴ See *id.* at 91.

¹⁹⁵ See Pedersen, *supra* note 185, at 91.

¹⁹⁶ See *id.* at 92.

¹⁹⁷ See *id.*

or the reasoning of the Oregon district court in *Thomas*, discussed in Part II, hold any hope?

First, the holding of *Jefferson County* relies on the states to act to enforce permit conditions.¹⁹⁸ The decision is limited to those states that have already taken steps to limit nonpoint source pollution.¹⁹⁹ However, the decision is not applicable to states that either fail to take an affirmative and aggressive stance on nonpoint source pollution or have been guilty of weak enforcement of NPDES permits.

If states continue to fail to address nonpoint source pollution, however, the holding of *NEA* holds some promise for citizens to step in where EPA and the states fear to tread. In *NEA*, the Ninth Circuit granted a citizens group the right to sue to enforce NPDES permit conditions that the state of Oregon had failed to vigorously enforce.²⁰⁰ Although this holding seemed to give citizen groups the power to force states to enforce their state water quality standards, the holding has a significant limitation: citizens may sue only to enforce a permit condition.²⁰¹ If the state of Oregon subsequently removed the reference to state water quality from the NPDES permit, the citizens group would no longer have a claim.²⁰² The Ninth Circuit explicitly distinguished this case from others where citizen groups were not allowed to enforce water quality standards when those standards were not part of NPDES permits.²⁰³ Therefore, the states may still limit the power of citizens to force the state to act by choosing not to include water quality standards as a condition of the NPDES permit.

Finally, even if a district court in another circuit adopted the Oregon district court's reasoning in *Thomas* that citizens can sue to limit activities that might result in nonpoint source pollution, the states still have primary control over the process.²⁰⁴

The district court in *Thomas* first reaffirmed the right of citizens to sue to enforce water quality standards as part of a federal permit.²⁰⁵ The court then expanded the scope of section 401 of the CWA to cover nonpoint sources of pollution.²⁰⁶ The court did not hold, however, that

¹⁹⁸ See PUD No. 1 of *Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700, 704 (1994).

¹⁹⁹ See *id.*

²⁰⁰ See *Northwest Env'tl. Advocates v. Portland*, 56 F.3d 979, 986-87 (9th Cir. 1995).

²⁰¹ See *id.* at 986.

²⁰² See *id.*

²⁰³ See *id.* at 989 n.11.

²⁰⁴ See *Oregon Natural Desert Ass'n v. Thomas*, 940 F. Supp. 1534, 1538 (D. Or. 1996).

²⁰⁵ See *id.*

²⁰⁶ See *id.* at 1540.

citizens could force a state to condition federal permits on compliance with state water quality standards—it merely held that applicants needed to receive state certification under section 401.²⁰⁷ Once again, if the states fail to enforce their authority, the reasoning of *Thomas*, notwithstanding its rejection by the Ninth Circuit, may not provide any new tool to force states to act to curb nonpoint source pollution.

C. Limitations on Citizen Suits to Enforce Water Quality Standards

Finally, even if existing case law were to grant citizens greater power in enforcing water pollution controls, several arguments suggest that citizen enforcement suits are not the best way to deal with water pollution.²⁰⁸ Although citizen suits are an important part of enforcement under the CWA, excessive reliance on citizens and courts to resolve disputes over CWA violations raises several concerns.²⁰⁹ First, courts may be forced to exceed their capabilities in balancing highly technical considerations to resolve disputes; second, permit holders may be treated unfairly by the courts; and third, excess reliance on citizens suits may result in inefficient enforcement.²¹⁰

As opposed to litigating a violation of a NPDES permit—where courts are required to compare the discharge with the standard—litigating violations of state water quality standards requires a more sophisticated analysis by courts.²¹¹ In cases involving nonpoint source pollution, it is often difficult to identify who is responsible for declining water quality. Therefore, in a river system where point and nonpoint sources contribute to declining water quality, targeting any one polluter as the responsible party requires a balancing of both scientific information and controversial policy choices.²¹² In any event, if courts are left to decide whether agricultural runoff, not the point source polluter, is responsible for water quality violations, courts may be forced to make decisions that are better left to the legislature.²¹³

This balancing of pollution leads to a second problem with citizen suit enforcement of water quality standards: fairness.²¹⁴ If a polluter

²⁰⁷ See *id.*

²⁰⁸ See Healy, *supra* note 16, at 443.

²⁰⁹ See *id.*

²¹⁰ See *id.*

²¹¹ See *id.* at 444.

²¹² See *id.* at n.243.

²¹³ See Healy, *supra* note 16, at 445.

²¹⁴ See *id.* at 449–50.

is in compliance with its NPDES permit, but the receiving water still fails to meet water quality standards, the polluter is likely to argue that other sources are responsible for the degradation. In such a case, it would be unfair to hold the polluter responsible for the acts of another NPDES permit holder, or worse, an exempt nonpoint source of pollution.²¹⁵

The final concern with citizen suits is that such suits would result in unacceptable social costs if the CWA were enforced to require compliance with every state water quality standard.²¹⁶ Enforcement authorities will often, under their discretion, not enforce statutory provisions that, if enforced to the letter of the law, would be too burdensome and unreasonable for permit holders.²¹⁷ Some commentators have even suggested that because there is no political or social mandate for regulating nonpoint sources of pollution to a higher degree, the public in fact supports weak enforcement of nonpoint source pollution.²¹⁸ Also, even if over-regulation of certain types of pollution might be in the interest of an issue-oriented citizen group, it might not make sense to the public at large.²¹⁹

Because of the limitations of citizen suits and the inherent problems with addressing nonpoint source pollution under the text of the CWA, an alternative mechanism for dealing with nonpoint source pollution is needed.

IV. ALTERNATIVE TO RELIANCE ON CWA: WATERSHED MANAGEMENT

Like the term "sustainable development," "watershed management" conjures up notions of a utopian solution to past failures in

²¹⁵ See *Northwest Envtl. Advocates v. Portland*, 56 F.3d 979, 992 (9th Cir. 1995) (Kleinfeld, J., dissenting).

²¹⁶ See Healy, *supra* note 16, at 451.

²¹⁷ See *id.*

²¹⁸ See *id.* at 452.

²¹⁹ See *Northwest Envtl. Advocates*, 56 F.3d at 992-93 (Kleinfeld, J., dissenting). Judge Kleinfeld suggested a hypothetical where a citizen group concerned with speeding automobiles is allowed to enforce speed limits with citizen enforcement. See *id.* (Kleinfeld, J., dissenting). The judge suggested that a "public interest advocacy group" might have an incentive to ticket anyone who drives even one mile per hour over the limit. The additional burden on the courts would be greatly disproportionate to the minimal advancement in public safety. See *id.* (Kleinfeld, J., dissenting). Although this analogy is helpful, it assumes that the police have identified the most efficient balance between public safety and administrative burden. If the states are currently prosecuting water quality violations at the most efficient level, then citizen suits would be unproductive. Arguably, however, citizen groups often play an important role in insuring that the "police" are "ticketing" at the right "speed."

ecosystem protection. The simplicity of the term belies the complex web of ecological, political, and social issues that must be addressed when developing a watershed protection program.²²⁰

A watershed is a “geographic area in which water, sediments, and dissolved materials drain to a common outlet—often a point on a larger stream, a lake, an underlying aquifer, an estuary, or an ocean.”²²¹ River watersheds are identified and bounded by the line drawn along the tops of surrounding high ridges where rain and surface water drain into the river, or the “drainage basin” of the river.²²²

This simple definition of watershed becomes more complicated when the term “management” is attached to discuss comprehensive, multidisciplinary programs in water resource management.²²³ The exact meaning of watershed management can change depending on the perspectives and priorities of the individual or group that offers the definition.²²⁴ Watershed management seeks to protect ecological resources and human health, and promote equitable and economically feasible solutions to environmental problems by involving a larger, decentralized group of interested parties, or “stakeholders” in the decisionmaking process.²²⁵

A. *Baseline Issues in Watershed Management*

Although the term “watershed management” is difficult to define, the underlying problems it seeks to address are easy to identify.²²⁶

1. Ecological Challenges

Watershed management programs attempt to address a comprehensive mix of water use and protection problems.²²⁷ Included in the scope of environmental factors considered are chemical water quality, such as toxic and conventional pollutants, and physical water quality, including temperature, minimum stream flows, circulation, and

²²⁰ See Goldfarb, *supra* note 13, at 483.

²²¹ See *id.* at 484 (citing U.S. EPA, THE WATERSHED PROTECTION APPROACH: AN OVERVIEW (Dec. 1991)).

²²² See *id.*

²²³ See U.S. EPA, *Watershed Protection: A Statewide Approach* 1.4 (last modified Feb. 26, 1996) <<http://www.epa.gov/OWOW/watershed/state/chap1.html>> [hereinafter EPA REPORT].

²²⁴ See Adler, *supra* note 14, at 976.

²²⁵ See *id.*

²²⁶ See *supra* Part III.

²²⁷ See EPA REPORT, *supra* note 223, at 1.4.

ground and surface water interaction.²²⁸ Other factors include the biological health and diversity of the watershed, involving species diversity and habitat protection, and subsurface water protection.²²⁹

These environmental concerns fall into three hydrological categories.²³⁰ First, water (and accompanying pollution) is carried from upstream areas to downstream areas; second, water passes between surface and sub-surface sources; and third, water runs from upland areas to the floodplains.²³¹ Because the ecological health of the watershed is affected by any activity that occurs on or below the land within the watershed, and because the water passes within and among these water-flow systems, a comprehensive watershed management approach hopes to reduce a greater proportion of the pollution load entering waterways from a diversity of sources to ensure that the resource will be protected.²³² Artificial distinctions between different "types" of water pollution, prompted by separate statutory and regulatory attempts to regulate navigable water, drinking water, and polluted runoff ignore this integrated relationship between surface and sub-surface water systems.²³³

2. Institutional and Political Problems

Watershed boundaries and political subdivisions often do not coincide.²³⁴ Landuse activity in one town, state, or region can have a detrimental effect on water quality a great distance away.²³⁵ In addition to "issue fragmentation" discussed above, where different statutes regulate interrelated actions, this "political fragmentation" among the different local, state, and federal agencies that exercise overlapping jurisdictions within watersheds creates institutional conflict that must be addressed in any comprehensive watershed management plan.²³⁶

²²⁸ See *id.*

²²⁹ See *id.*

²³⁰ See Adler, *supra* note 14, at 982.

²³¹ See *id.*

²³² See *id.*

²³³ See *id.* Current criticism of point source regulation as inefficient underlies this point. See Pedersen, *supra* note 185, at 83. Given that the CWA favors the consistent implementation of discharge standards for similar industrial and municipal sources regardless of the ambient water quality of the receiving waterway, under and overregulation are a constant problem. See *id.* In addition, with over half of the pollution entering waterways from nonpoint sources, further regulation of point sources is ineffective and inefficient. See *id.* at 71.

²³⁴ See EPA REPORT, *supra* note 223, at 1.5.

²³⁵ See *id.*

²³⁶ See Adler, *supra* note 14, at 991.

On the federal level, thirteen congressional committees, eight cabinet agencies, six independent regulatory agencies, and the White House are involved in water policy planning.²³⁷ At the state level, more than 300 departments exist to regulate water use and pollution.²³⁸ Also, poor water quality, which is regulated by the state and federal governments, is often linked to land use, which is regulated by local government. This vertical regulatory division is not conducive to a comprehensive plan to protect water resources.²³⁹

3. Individual Behavior Issues

Local landuse decisions have a large impact on water quality, and these decisions usually involve the regulation of individual behavior.²⁴⁰ Regulations that decide where houses can be built, which trees can be cut down, or whether cattle can drink out of a river, are difficult political (and sometimes constitutional) choices that are avoided by traditional regulatory approaches to water protection.²⁴¹ By relying primarily on regulation of industrial and municipal discharges, the general public has only indirectly contributed to cleaning up our waterways through higher consumer prices and sewer bills.²⁴²

B. Past Attempts at Watershed Protection

1. Federal Programs

In addition to the CWA, a long list of federal legislative initiatives have attempted to encourage watershed management.²⁴³ Prior to the CWA and its predecessors, proposals for watershed-based resource

²³⁷ See Goldfarb, *supra* note 13, at 485.

²³⁸ See *id.* Also, state water use rights such as "prior appropriation," "reasonable use," or "absolute ownership" often conflict with state and federal water protection standards. See *id.* at 486.

²³⁹ See *id.* at 485. Goldfarb contends that land use and water quality are inextricably linked; water is a basic resource with development requiring both a clean water source, and a water system that accepts waste discharges within or nearby the watershed system. See *id.*

²⁴⁰ See Pedersen, *supra* note 185, at 71.

²⁴¹ See *id.*

²⁴² See Scott Allen & Judy Rakowsky, *300 Burn MWRA Bills in Chelsea*, BOSTON GLOBE, May 14, 1993, at 25. It would, however, be misleading to suggest that these "indirect costs" have not raised protests. Rising water and sewer bills that resulted from the Boston Harbor Cleanup created social and political unrest in and around Boston in the 1980s when groups burned their water bills in protest. See *id.* This demonstration, and others like it, led to a reduction in the scope of the Deer Island Wastewater Treatment project, and therefore were a limitation on the state and federal agencies involved with the cleanup. See *id.*

²⁴³ See Adler, *supra* note 14, at 1004 n.166.

management arose during the 1930s and 1940s in proposals by the National Planning Board, the Water Resources Committee of the National Resources Commission (NRC), and the National Resources Planning Board (NRPB).²⁴⁴ These programs all advocated a comprehensive approach that involved all available resources in a unified program for conservation and water allocation.²⁴⁵ These programs were similar to today's watershed-based management proposals in that they recognized the intimate relationship between land use and water quality protection.²⁴⁶ However, although these proposals pledged a multidisciplinary approach to managing water resources, Congressional opposition to the centralized planning essential to carrying them out eventually led to their demise.²⁴⁷

a. *Flood Control Legislation*

Flood control legislation focused primarily on human use of water and water-based economic development projects such as the "break-neck dam construction" under the Tennessee Valley Authority Act.²⁴⁸ Similarly, flood control legislation from 1936 to 1954 reflected the common "capture" of comprehensive water resource management plans by agencies that focused on development and construction projects that subverted the original goals of conserving natural resources.²⁴⁹

²⁴⁴ See *id.* at 1007.

²⁴⁵ See *id.* at 1007-08.

²⁴⁶ See *id.* at 1008.

²⁴⁷ See *id.* at 1009. The proposal for a National Resources Planning Board was dismissed by Congress as un-American and was eliminated in 1942. See *id.* at 1009. Prior attempts at watershed based management in the first decades of the 20th Century also faced strong opposition on institutional grounds. See *id.* at 1006. The 1908 Inland Waterways Commission, the 1909 National Conservation Commission, the 1912 National Waterways Commission and the 1917 Newlands Commission all contained elements similar to modern day watershed management plans, including goal coordination, inter-agency cooperation, multidisciplinary planning, and linking land and water use. See *id.* at 1005. These early plans also fell victim to power struggles between the President and Congress over control of resource protection. See *id.* at 1006.

²⁴⁸ See Adler, *supra* note 14, at 1060. In addition to the TVA, the 1920 Federal Power Act created the Federal Power Commission (FPC) (now the Federal Energy Regulatory Commission or FERC) creating a single federal permitting agency for dams on navigable waters and federal lands. See *id.* at 1019. The primary purpose of this statute was to regulate and promote the development of hydropower facilities. See *id.* at 1020. However, even on this issue, the FPC did not coordinate its efforts with any other agency responsible for water resource management and it was not until 1986 that the agency was required to consider fish habitat and wildlife and environmental values in its permitting decisions. See *id.* at 1022.

²⁴⁹ See *id.* at 1023.

The operation of the 1936 Flood Control Act is an example of these conflicting goals.²⁵⁰ Although the initial intent of the Flood Control Act was to encourage information collection for watershed planning, the information was actually used to determine the impact of proposed hydropower and flood control projects on navigable waterways.²⁵¹ In addition, the legislation allowed for, but did not require, interagency cooperation in addressing the environmental impacts of development projects.²⁵² Subsequently, the cooperation that resulted under the Act was limited to the Army Corps of Engineers sending the collected input of other agencies to Congress whenever the Army proposed recommendations for certain hydro-power projects.²⁵³

b. *1954 Watershed Protection and Flood Prevention Act and Soil Conservation Service*

The 1954 Watershed Protection and Flood Prevention Act improved upon prior flood prevention legislation with the creation of the "Small Watersheds" program.²⁵⁴ This program was administered by the Soil Conservation Service (SCS), an agency within the Department of Agriculture.²⁵⁵ The operation of the Small Watersheds program differs from prior attempts at flood control because under the program, landuse controls to reduce agricultural runoff were added to dam projects to control flooding.²⁵⁶ In addition to considering landuse issues, the SCS coordinated erosion control efforts governed by water erosion committees that considered local and regional problems.²⁵⁷ Even though the program was voluntary, many farmers participated by engaging terraced land treatment, crop rotations, controlled livestock grazing, and revegetation projects along waterways.²⁵⁸

The operation of the SCS has continued virtually unchanged since 1954.²⁵⁹ It is an important example of a "bottom-up" management system in which local individuals who are familiar with the problems

²⁵⁰ See 1936 Flood Control Act §§ 1-9, 33 U.S.C. § 701(a)-(f), (h) (1994).

²⁵¹ See *id.* § 701; Adler, *supra* note 14, at 1026.

²⁵² See 33 U.S.C. § 701(a).

²⁵³ See Adler, *supra* note 14, at 1026. As with other flood control measures, the 1936 Flood Control Act focused on engineering solutions to control rivers so as to "improve" them. See *id.* at 1027. Nowhere in the statute were there provisions to adjust land use to minimize runoff and irresponsible development. See *id.*

²⁵⁴ See WATER LAW, *supra* note 9, at 85.

²⁵⁵ See *id.*

²⁵⁶ See *id.* at 86.

²⁵⁷ See Adler, *supra* note 14, at 1029.

²⁵⁸ See *id.* at 1030.

²⁵⁹ See *id.*

in their area develop systems of dealing with water resource issues.²⁶⁰ Although the SCS did not require local farmers' participation, the SCS has been successful because local individuals were not beholden to some faceless bureaucrat in Washington, D.C.²⁶¹ In addition, the success of the SCS may also be attributed to the cost-sharing between the federal government and the local organizations administering the program.²⁶² This process has prevented the local groups from becoming dependent on federal subsidies for the soil conservation projects, and has thus resulted in better managed, more efficient projects that meet local needs without wasting unnecessary federal resources.²⁶³

c. *Federal Navigation Laws*

Congress has given statutory authority to the Army Corps of Engineers to maintain navigable waterways beginning with the Rivers and Harbors Appropriations Act of 1884.²⁶⁴ Prior to the most recent change in 1986, the Army Corps was authorized to maintain navigation by constructing and dredging harbors, and other projects that provided for the safe passage of ships.²⁶⁵ Although the Army Corps had discretionary authority to consider environmental issues such as building fish passages, Congress and the Army were still primarily interested in human-centered uses of navigation and power creation.²⁶⁶

In 1986, Congress passed the Water Resources Development Act. This Act provided for studies of the Army's ability to protect fish and wildlife, required consideration of nonstructural alternatives to navigation projects and balancing for benefits of ecosystem protection, and provided funding for environmental resource mitigation.²⁶⁷

²⁶⁰ See *id.*

²⁶¹ See *id.* at 1028–30.

²⁶² See WATER LAW, *supra* note 9, at 86–87.

²⁶³ See Adler, *supra* note 14, at 1031.

²⁶⁴ See 33 U.S.C. § 5 (1994).

²⁶⁵ See Adler, *supra* note 14, at 1035 (citing River and Harbor Improvements Act, 33 U.S.C. §§ 540–633 (1994)).

²⁶⁶ See *id.* at 1036.

²⁶⁷ See *id.* Other federal statutes such as the Fish and Wildlife Coordination Act (FWCA), 16 U.S.C. §§ 661–666(c) (1994), and the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321–4370(d) (1994), have the potential to be used to advance watershed protection goals given their emphasis on evaluating environmental impacts in a comprehensive fashion. However, each statute is primarily used to guide substantive decision making with other statutes; without such a statute for watershed protection, their use is limited. See Adler, *supra* note 14, at 1049. Similarly, although the Endangered Species Act (ESA), 16 U.S.C. §§ 1531–1544 (1994), requires protection of habitat in certain circumstances, the ESA offers protection only when an

d. *President Clinton's 1998 Clean Water Initiative*

In his January 27, 1998, State of the Union Address, President Bill Clinton presented his new Clean Water Initiative—a comprehensive outline of strengthening CWA standards, improving inter-agency cooperation on clean water, and focusing on watersheds as the building blocks of clean water policy.²⁶⁸

This Clean Water Action Plan (CWAP) focuses on watersheds as the most efficient framework for dealing with multifaceted water resource protection issues.²⁶⁹ The President's watershed approach involves four key elements. First, the plan calls for a unified effort of states, tribes, and the federal government in identifying watersheds that require immediate assistance, pristine watersheds that need protection to preserve their wild character, and threatened watersheds that need extra attention.²⁷⁰ This unified approach in information gathering should improve leveraging of scarce resources and allow for increased efficiency in meeting current regulatory standards.²⁷¹

The second key element is cooperation among local communities, the public, and federal agencies to develop strategies to clean up watershed ecosystems that currently fail clean water and natural resource goals.²⁷² Funding will be provided in the FY 1999 Clean Water and Water Restoration Budget Initiative to assist with this process.²⁷³ The third element is pollution prevention.²⁷⁴ The CWAP

endangered species has been identified. *See id.* at 1054. Finally, although the Safe Drinking Water Act (SDWA), 42 U.S.C. §§ 300f-j (1994), provides for protection of underground drinking water with a focus on all sources of pollution, as with the ESA, this Act is limited as it is only useful if the underground water supply is used for drinking water. *See id.* at 1058. However, the SDWA does have one section that allows states to choose between watershed protection projects and water filtration to maintain clean drinking water from reservoirs. *See* 42 U.S.C. § 300g-1(b)(7)(C)(i). This provision encourages states to implement watershed protection strategies to avoid the high cost of water filtration projects. *See id.*; National Primary Drinking Water Regulations, 40 C.F.R. § 141.71 (1998). This option, however, is voluntary. In Massachusetts, for example, the State Department of Environmental Protection (DEP) has promoted a watershed protection approach to the Quabbin and Wachusett reservoirs that provide drinking water for the greater Boston area. The state is nevertheless still being sued by EPA to build a costly multi-million dollar filtration plant.

²⁶⁸ U.S. ENVTL. PROTECTION AGENCY, CLEAN WATER ACTION PLAN: RESTORING AND PROTECTING AMERICA'S WATERS (1998) (visited Apr. 14, 1998) <<http://www.epa.gov/cleanwater/>> [hereinafter EPA WATERSHED PLAN].

²⁶⁹ *See id.* at Ch. III.

²⁷⁰ *See id.* at Overview.

²⁷¹ *See id.*

²⁷² *See id.*

²⁷³ *See* EPA WATERSHED PLAN, *supra* note 268, at Overview.

²⁷⁴ *See id.*

calls for protecting pristine areas as the most cost-effective strategy for meeting clean water goals.²⁷⁵

The final element involves funding.²⁷⁶ Federal agencies will provide small grants to local organizations who wish to take a leadership role in fostering local efforts to restore and protect watersheds.²⁷⁷ This will include an increase in section 319 grants from \$105 million in FY 1998 to \$200 million in FY 1999.²⁷⁸

These four key elements to watershed protection will operate in a framework of increased participation by local "stakeholders"—residents, organizations, businesses, and government agencies that live, work, and operate at the local level.²⁷⁹ This "bottom-up" approach is reflected in many of the state and federal watershed management plans, and will encourage not only greater participation in goal setting and identifying water quality problems, but will also increase the acceptance of regulatory changes or landuse restrictions that might follow during implementation.²⁸⁰

Finally, the President's CWAP seeks to combine the forces of the federal agencies, while encouraging, through grants and organizational and technical assistance, local communities to work together on a watershed basis.²⁸¹

2. State Watershed Management Initiatives

The three following state and regional programs outline some common goals and problems that arise with a watershed approach to managing water resources.²⁸² First, the Chesapeake Bay Program is a regional agreement involving section 117 of the CWA.²⁸³ Second, the Puget Sound initiative is a state program to address the institutional and political barriers to protecting Puget Sound from pollution.²⁸⁴ Finally, the New York City drinking water protection program is a

²⁷⁵ See *id.*

²⁷⁶ See *id.*

²⁷⁷ See *id.*

²⁷⁸ See EPA WATERSHED PLAN, *supra* note 268, at Overview. This should somewhat strengthen the section 319 program discussed in Part I *supra*.

²⁷⁹ See *id.* at Ch. III.

²⁸⁰ See *id.*

²⁸¹ See *id.*

²⁸² Chesapeake Bay Program, Puget Sound Initiative, and the New York City Drinking Water Program.

²⁸³ See Adler, *supra* note 14, at 1071.

²⁸⁴ See generally Katherine Fletcher, *Protecting Puget Sound: An Experiment in Regional Governance*, 65 WASH. L. REV. 359 (1990).

classic example of conflicting goals and priorities between discrete political groups within a state.²⁸⁵

a. *Chesapeake Bay Program*

Section 117 of the CWA,²⁸⁶ in concert with the 1983 and 1987 Chesapeake Bay Agreements (the Agreement),²⁸⁷ created an interstate covenant outlining a series of goals, including a commitment by the signatories to reduce nutrient inflows into Chesapeake Bay by forty percent by the year 2000.²⁸⁸

In addition to the nutrient reduction goal, the Agreement recognizes the important link between land use, growth control, and water quality.²⁸⁹ A multidisciplinary panel was convened to set goals for the sound management of land and sustainable development of the Chesapeake Bay watershed.²⁹⁰ This report identified six priorities for protecting the Bay through improved land use.²⁹¹ First, the report called for concentrating development in suitable areas; second, sensitive areas were to be protected; third, development should be directed to existing population areas to protect pristine and agricultural areas; fourth, the report urged creating a "universal ethic" to protect the Bay and its ecosystem; fifth, enhancement of recycling and resource conservation was called for; and sixth, the report encouraged funding to support these goals.²⁹²

Although the Agreement did not suffer from a lack of public participation and bottom-up goal setting, implementation of the stated goals has not kept up with the aggressive planning.²⁹³

²⁸⁵ See U.S. Env'tl. Protection Agency, WATERSHED PROGRESS: NEW YORK CITY WATERSHED AGREEMENT, EPA 840-F-96-005 (Dec. 1996) (last modified Feb. 27, 1997) <<http://www.epa.gov/OWOW/watershed/ny/nycityfi.html>> [hereinafter NY REPORT].

²⁸⁶ Chesapeake Bay Program, 33 U.S.C. § 1267 (1994).

²⁸⁷ See Adler, *supra* note 14, at 1071.

²⁸⁸ See *id.* Maryland and Virginia were the initial parties to the agreement; Pennsylvania was added in 1985. See *id.*

²⁸⁹ See *id.* at 1072.

²⁹⁰ See *id.*

²⁹¹ See *id.* at 1072 n.607.

²⁹² See Adler, *supra* note 14, at 1072 n.607.

²⁹³ See *id.* The public participation process involved more than 50 subgroups and committees. See *id.* However, even the organizers admit that implementation is far behind. Even the 40% reduction in nutrient loading is behind schedule. See *id.* at 1071 (citing CHESAPEAKE BAY FOUND., A REVIEW OF THE CHESAPEAKE BAY PROGRAM'S FIRST DECADE AND RECOMMENDATIONS FOR THE FUTURE (1993)).

b. *Puget Sound, Washington*

In 1983 the Washington State legislature created a citizen commission (the Commission) to study the health of Puget Sound and make recommendations for its cleanup.²⁹⁴ The initial findings of this group, which led to the creation of the Puget Sound Water Quality Authority, concluded that the water quality problems of the Sound involved a complex web of jurisdictions, and a multitude of individual decisions and activities by landowners, government actors, and individual citizens.²⁹⁵ In addition, the Commission cited a lack of coordination and focus between the individuals and groups responsible for polluting and protecting the Sound.²⁹⁶

Because sources of pollution were diverse,²⁹⁷ and jurisdiction was a maze of conflicting agencies and tribal organizations, a comprehensive management plan for Puget Sound was established to address both the diversity of pollution and the political and institutional problems facing the Sound.²⁹⁸ With regard to pollution, all sources, from point sources then covered by NPDES permits, to polluted runoff, storm-water pollution, and wetlands degradation, were covered by the plan.²⁹⁹

To defeat the institutional problems, the management plan not only involved the public in goal-setting and implementation, but also attempted to integrate agency action to prevent jurisdictional conflicts.³⁰⁰

Because successful implementation of watershed protection involves landuse controls that often create a public backlash, the management plan involved a large public education project.³⁰¹ The educa-

²⁹⁴ See Fletcher, *supra* note 284, at 362. Puget Sound stretches from the Canadian border south to Olympia, Washington and includes 40 separate ports. See *id.* at 363. The Puget Sound's watershed includes 12 counties, more than 100 cities, and 14 Native American tribes. See *id.*

²⁹⁵ See *id.* at 362 (citing PUGET SOUND WATER QUALITY AUTH., ANNUAL REPORT I (1984)).

²⁹⁶ See *id.* The Commission documented serious threats to the health of Puget Sound, including closing of shellfish beds due to disease-causing bacteria from human waste sources. In addition, more than half of the Sound's wetlands had been altered or destroyed by development, and toxic concentrations in the sediment at the bottom of the Sound posed the greatest long-term threat to the clean up. See Fletcher, *supra* note 284, at 365.

²⁹⁷ See *id.* Pollution sources included industrial and municipal point source discharges, contaminated urban and rural runoff, failed septic systems, combined sewer overflows from wastewater treatment facilities, and discharges from boats. See *id.*

²⁹⁸ See *id.* at 366.

²⁹⁹ See Fletcher, *supra* note 284, at 366-67.

³⁰⁰ See *id.*

³⁰¹ See *id.*

tional efforts included local “field agents” conducting outreach education on watershed protection, educational information available in public places, small grants to grassroots organizations, outreach to the business community, and hands-on projects involving children.³⁰²

As of 1990, the Puget Sound Management Plan had resulted in the identification of twelve “early action” watersheds for priority non-point source pollution programs.³⁰³ Forty-eight public education programs that reached more than one million residents of the watershed had been completed.³⁰⁴ Also, many substantive actions had reached implementation, including a tightening of state regulation of point sources, new water testing facilities to provide accurate monitoring of the effectiveness of the new pollution controls, wetlands acquisitions in pristine areas, and the development of an ongoing shellfish testing program.³⁰⁵

In 1994, following another round of public hearings, the Puget Sound Water Quality Authority released a new report outlining the biggest threats to water quality in Puget Sound.³⁰⁶ The release of the Authority’s recommendations was met with skepticism by environmentalists who criticized the Authority for focusing too much on planning and not enough on action.³⁰⁷ Under the Puget Sound Management Plan, the Authority did not have the regulatory power to force the state to take action, and thus, environmentalists contended that without a legal mandate to back up the recommendations of the Authority, further delays in implementation were likely.³⁰⁸

Finally, in 1996, the Washington state legislature abolished the Puget Sound Water Quality Authority and its citizens’ governing board, and replaced it with a “Puget Sound Action Team” consisting of ten state agency directors and other political appointees.³⁰⁹ This attempt to remove power from the Authority forced the environmental community to file an initiative petition to address the political frailty of the Puget Sound Management Plan.³¹⁰

³⁰² See *id.* at 366.

³⁰³ See *id.* at 369.

³⁰⁴ See Fletcher, *supra* note 284, at 370.

³⁰⁵ See *id.*

³⁰⁶ See Sandi Doughton, *Controls on Runoff, Septic Use Proposed*, NEWS TRIBUNE, Mar. 3, 1994, at B1.

³⁰⁷ See *id.*

³⁰⁸ See *id.*

³⁰⁹ See People for Puget Sound, *Just How Bad is Our Legislature*, (last modified Mar. 1, 1998) <<http://www.pugetsound.org/newsletter/n0896/newsletter0896.htm>>.

³¹⁰ See *id.*

c. *New York City Watershed Protection Plan*

On January 21, 1997, EPA granted a five-year waiver to New York City for construction of a \$6 billion drinking water filtration plant.³¹¹ This compromise followed four years of negotiations between the city of New York, EPA, and the upland communities that surround New York City's drinking water reservoirs.³¹²

The pressure from EPA to build a filtration plant was in response to water quality testing that showed alarming levels of microbial pathogens and phosphorus originating from both point-wastewater discharges and nonpoint urban and rural runoff.³¹³ A group was convened to negotiate a watershed approach to address this pollution so as to avoid a costly filtration plant.³¹⁴ This working group contained representatives from the state, the city, the watershed communities, EPA, and environmental groups.³¹⁵

Ten months of negotiations resulted in a watershed protection plan in which the city of New York would purchase sensitive land to protect the reservoirs, conduct more extensive water quality testing, support city/upstate partnership programs to develop better wastewater treatment facilities and help promote alternative economic development in the watershed communities.³¹⁶ The state of New York agreed to adopt the city's watershed protection regulations on land use and promised to enforce them in the watershed communities.³¹⁷ Watershed residents were allowed either to develop their property as the new regulations allowed, or to sell their land to the city.³¹⁸

Although the agreement was praised by such environmental organizations as the Hudson Riverkeeper Fund, represented by Robert F. Kennedy, Jr., some organizations, such as the National Resources Defense Council, criticized the agreement as the product more of

³¹¹ See Associated Press, *Pact Signed to Protect NYC Water Supply*, N.Y. TIMES, Jan. 22, 1997, at B2.

³¹² See NY REPORT, *supra* note 285. New York City owned less than four percent of the land in the Delaware and Catskill watershed, an area of approximately 1900 square miles. See Andrew Revkin, *Troubled Waters—A Special Report*, N.Y. TIMES, Aug. 31, 1997, § 1, at 1.

³¹³ See NY REPORT, *supra* note 285.

³¹⁴ See *id.*

³¹⁵ See *id.*

³¹⁶ See *id.*

³¹⁷ See *id.*

³¹⁸ See NY REPORT, *supra* note 285. The agreement ended more than a dozen existing lawsuits brought by aggrieved landowners that had claimed the draft regulations proposed by New York City violated "home rule" and were therefore takings of property without compensation. See Andrew C. Revkin, *Watershed Protection Agreement Is Praised*, N.Y. TIMES, Sept. 11, 1996, at B3.

political than of ecological pressure.³¹⁹ However, even critics found the agreement to be not only a positive first step in protecting the reservoir watersheds in upstate New York, but also a successful negotiation that forced compromise resulting in action, as opposed to mere planning.³²⁰

The Chesapeake Bay Program, Puget Sound Initiative, and the New York City drinking water protection program are examples of state efforts to protect water resources that addressed the institutional and political barriers often ignored by traditional regulatory solutions. By confronting conflicting goals and priorities between discrete social and political groups, these state efforts have attempted, with varying success, to develop a new mechanism to protect water resources.

V. CASE STUDY: MASSACHUSETTS WATERSHED INITIATIVE

In 1993, then Secretary of the Executive Office of Environmental Affairs (EOEA) of Massachusetts, Trudy Coxe, along with environmental, civic, and other municipal groups, launched the Massachusetts Watershed Initiative (MWI) to better identify environmental problems and improve the delivery of state agency services.³²¹ The MWI is a community-based management approach that encourages local individuals, groups, businesses, and municipal officials to set priorities for environmental protection within their respective watersheds.³²² These local groups, called "basin teams" or "watershed teams," create an inventory of local environmental priorities; this information forms the basis of recommendations to the Secretary of EOEA to set budgeting priorities among the state environmental agencies.³²³ This information is used to improve coordination among the state environmental agencies, prevent duplication of efforts between agencies encourage involvement of local stakeholders in environmental management, and enhance awareness of state environmental protection efforts.³²⁴ Moreover, this framework seeks to achieve measurable improvements in water quality, protect and restore wildlife habitat, improve public access to waterways, improve local control over water

³¹⁹ See Revkin, *supra* note 318, at B3.

³²⁰ See *id.*

³²¹ U.S. ENVTL. PROTECTION AGENCY, WATERSHED PROGRESS: MASSACHUSETTS' APPROACH, EPA 840-F-96-004 1 (Feb. 1997) [hereinafter EPA PROGRESS].

³²² See *id.*

³²³ See PAULA JEWELL, THE MASSACHUSETTS WATERSHED INITIATIVE: OPPORTUNITIES AND CHALLENGES IN RESHAPING GOVERNMENT (1998) (on file with author).

³²⁴ See EPA PROGRESS, *supra* note 221, at 2.

resources, and encourage shared responsibility for sustainable water resource management.³²⁵

Confronting these laudable goals are several accepted challenges that the MWI must overcome, such as the political, institutional, and social barriers to watershed protection discussed earlier in this Comment.³²⁶ First and foremost, the MWI seeks to realign the state agencies responsible for environmental resource protection to eliminate waste, redundancy and conflict and to focus agency action on local environmental priorities.³²⁷ Also, individuals, industry, and municipal officials are encouraged to plan and operate within a watershed framework, as opposed to within municipal boundaries.³²⁸ Finally, sound scientific research is to be developed to give authority to proposed reallocation of resources due to identified environmental problems.³²⁹

A. *Neponset River Watershed Pilot Project*

The first step in implementing the MWI began in December of 1994 in the Neponset River Watershed.³³⁰ State and federal agencies met with representatives of local environmental organizations, municipal officials and business leaders to identify environmental problems in the Neponset River watershed.³³¹ In addition to identifying environmental problems in the Neponset watershed, this pilot program was to test the effectiveness of watershed-based management, to identify conflicts between the participating "stakeholders" that gathered to discuss environmental priorities, and to outline a water resource management scheme that could be replicated statewide.³³²

The public meetings and educational events involving a broad range of interested individuals and groups from within the watershed resulted in several small successes, as well as several large victories for water resource protection.³³³ A legal agreement was reached to clean up a hazardous waste site, sewer line leaks responsible for elevated

³²⁵ See *id.* at 3.

³²⁶ See *supra* notes 205–20 and accompanying text.

³²⁷ See Jewell, *supra* note 323, at 1.

³²⁸ See *id.*

³²⁹ See *id.*

³³⁰ The Neponset River Watershed is located south and west of Boston—the Neponset River begins in Foxboro, Mass. and flows 30 miles through 14 municipalities to Dorchester Bay in Boston. See Jeff McLaughlin, *Rediscovering the Neponset River*, BOSTON GLOBE, May 5, 1996, at South Weekly, 1.

³³¹ See EPA PROGRESS, *supra* note 321, at 1.

³³² See *id.* at 1–2.

³³³ See *id.*

bacteria counts in the Neponset River were fixed, and the owner of a horse racing track agreed to reduce soil erosion from the track site.³³⁴ In addition, the city of Boston agreed to eliminate hundreds of illegal sewer hookups that were dumping untreated sewerage into the Neponset River estuary.³³⁵

In addition to these concrete improvements to the water quality of the Neponset River Watershed, the public education campaign greatly increased public awareness of watershed-based management. The entire process strengthened the Neponset River Watershed Association, a nonprofit environmental organization that continues to coordinate environmental resource planning under the MWI.³³⁶

Because of the initial success of the Neponset pilot program, then Secretary Coxe moved to implement the Massachusetts Watershed Initiative on a statewide scale.³³⁷ Understanding how the statewide MWI will work requires a discussion of the proposed structure of this watershed management proposal.

B. *Structure of the Massachusetts Watershed Initiative*

The MWI framework is divided into three main segments: first, "Resource Allocation" is a process to determine the allocation of financial resources among the environmental agencies within the Massachusetts Executive Office of Environmental Affairs (EOEA); second, "Stakeholder/Science Input" will collect information on scientific and ecological processes and local conditions to identify environmental protection goals within each watershed; and third, "Implementation" is a process of applying the proposed changes to agency resource allocation and local environmental planning, as well as evaluating the outcome of specific projects to determine the success of the MWI in addressing watershed based challenges.³³⁸

The link that connects these three segments is the "watershed team," consisting of a full-time staff person from EOEA and residents of the local watershed communities.³³⁹ The watershed teams identify

³³⁴ See *id.*

³³⁵ See *id.* at 2.

³³⁶ See Jewell, *supra* note 323, at 3.

³³⁷ See *id.* at 4.

³³⁸ See *id.*

³³⁹ These "community partners" include environmental organizations, citizen "stream teams," small local groups that collect water quality data and participate in hands-on environmental protection efforts, municipal officials and members of the business community. See EPA PROGRESS, *supra* note 321, at 2.

environmental priorities and make suggestions as to how the resources within EOEa should be allocated.³⁴⁰ A watershed team currently exists for twenty of Massachusetts's twenty-seven watershed basins.³⁴¹

1. Segment One: EOEa Agency Resource Allocation

In the Resource Allocation segment, these watershed teams report to a watershed "roundtable," which consists of senior level managers from the state environmental agencies and individuals from the communities.³⁴² This roundtable resolves disputes concerning allocation of resources among the environmental agencies and makes final recommendations to the Secretary of EOEa, who incorporates the suggestions of the watershed teams and watershed roundtables into the annual budget.³⁴³ This segment of the MWI is concerned with how to make the existing resources within EOEa more responsive to the needs of local watersheds. Therefore, if in one year a significant number of watershed teams report to the Secretary that land acquisition is a priority, then the Secretary can divert more resources in that annual budget to land protection programs.³⁴⁴

2. Segment Two: Stakeholder/Science Input

In the second segment, stakeholder/science input, the watershed teams tap into the local knowledge of the community members of the watershed team to evaluate the environmental priorities for the watershed. The teams then collect scientific information to assist in developing strategies to address these environmental goals.³⁴⁵ Therefore, in this segment, the watershed teams not only make annual recommendations to the Secretary for agency resource allocation, but they also develop a five-year plan for ultimately protecting and restoring the ecological health of the entire watershed.³⁴⁶

³⁴⁰ See *id.* at 5.

³⁴¹ Massachusetts is unique in that a private, nonprofit "watershed association," a local watershed-based environmental organization, exists for each of the state's 27 watersheds. See EPA PROGRESS, *supra* note 321, at 1.

³⁴² See Jewell, *supra* note 323, at 6.

³⁴³ See Interview with Ed Himlan, *supra* note 171.

³⁴⁴ See *id.* This means, of course, that the constituents of the other programs within EOEa that see their programs cut are likely to be unhappy. However, the goal of the MWI is to have many of these constituencies involved in the basin teams, so conflicts over resource allocation will be resolved at the local level, not during the state budget process. See *id.*

³⁴⁵ See Jewell, *supra* note 323, at 6.

³⁴⁶ See *id.*

This five-year plan includes a year each of outreach, research, assessment, planning and implementation, and evaluation.³⁴⁷ During the outreach year, the watershed team will encourage participation of the broadest possible group of local officials, environmentalists, and business leaders in order to educate them of the need for watershed-based management, and the benefits of the MWI.³⁴⁸

During the research year, the watershed teams will collect information regarding the unique environmental resource protection issues facing their watershed, and this information will be assessed during the third year.³⁴⁹ The teams establish and implement a plan during year four and evaluate that plan during year five.³⁵⁰

The watershed teams then begin the process again by continuing to identify new participants in the team, collecting new information on the health of the watershed, and establishing new plans for protecting the watershed resources.³⁵¹ This five-year cycle is meant to be flexible and to provide a framework for action—not necessarily a concrete timeline.³⁵² This cycle may be modified to best address the local needs of the watershed.³⁵³

3. Segment Three: Implementation

The final goal of the MWI is for the watershed teams to lead to the permanent establishment of local “Watershed Community Councils” (WCCs).³⁵⁴ These WCCs would continue to gather information and set priorities for protecting their watersheds, and the results of these local projects would be used by the teams to continue to improve the efficiency and effectiveness of state environmental agency resources.³⁵⁵

C. Next Steps for the Massachusetts Watershed Initiative

Several lessons can be learned from both the Neponset pilot project and the early stages of statewide implementation of the MWI. As the

³⁴⁷ See *id.*

³⁴⁸ See Interview with Ed Himlan, *supra* note 171.

³⁴⁹ See *id.*

³⁵⁰ See *id.*

³⁵¹ See *id.*

³⁵² See *id.*

³⁵³ See Interview with Ed Himlan, *supra* note 171.

³⁵⁴ See EPA PROGRESS, *supra* note 321, at 2.

³⁵⁵ See Jewell, *supra* note 323, at 6.

front line contact with the communities, the role of the teams should be further strengthened. Furthermore, additional funding for obtaining scientific data to support local decisions is crucial to the success of the MWI, and more education is necessary to encourage individuals, municipalities and businesses to think about environmental protection in a watershed context.³⁵⁶

1. Refinement and Enhancement of Watershed Teams

In early 1998, Massachusetts EOEa Secretary Trudy Coxe announced the appointment of twenty-seven full-time watershed team leaders.³⁵⁷ Accompanying the elevation of the team leader to full-time status, the Secretary committed \$2 million for the MWI, including \$700,000 for grants to watershed groups, \$100,000 for training of the team leaders, and \$600,000 for a science and technical center to provide necessary data for the watershed teams to make informed recommendations to the environmental agencies.³⁵⁸

2. Development of Science and Technology Center

With the assistance of the \$600,000 proposed for FY 1999, the development of a science and technology center will be important to ground policy decisions in real information regarding the health of the watershed.³⁵⁹ This information, collected by state and federal environmental agencies as well as volunteer "stream teams," would form the factual basis for agency recommendations and environmental action.³⁶⁰

3. Creating a Watershed Ethic

Currently, state and federal environmental agency funds are often spent without a general public awareness of the benefits to environmental protection.³⁶¹ Subsequently, when environmental laws are reviewed in Congress or in the state legislatures, public support may not be sufficient to ensure that the statutes remain in force.³⁶²

³⁵⁶ See *id.* at 6–8.

³⁵⁷ See Executive Office of Env'tl. Affairs, *Coxe Announces Statewide Watershed Basin Team Leaders*, (visited Mar. 2, 1998) <<http://www.magnet.state.ma.us/envir/news/btl.htm>>.

³⁵⁸ See Secretary of Executive Office of Env'tl. Affairs Trudy Coxe, *Remarks to Watershed Basin Team Leaders* (visited Mar. 2, 1998) <<http://www.magnet.state.ma.us/envir/tcbtl.htm>>.

³⁵⁹ See Jewell, *supra* note 323, at 6.

³⁶⁰ See *id.*

³⁶¹ See Interview with Ed Himlan, *supra* note 171.

³⁶² See *id.*

In addition, many individuals, municipalities, and businesses are unaware of how their actions affect the overall health of the watershed. The MWI seeks to both involve local stakeholders in identifying environmental priorities and educate these stakeholders about how the watershed works—how their behavior affects environmental resources.³⁶³

The MWI seeks to encourage the public to think along watershed lines, overcome resistance to addressing environmental problems in new ways, and resolve conflicts in a setting of mutual respect.³⁶⁴

VI. ANALYSIS OF MWI IN THE CONTEXT OF PAST ATTEMPTS AT WATERSHED MANAGEMENT

To analyze the strengths and limitations of the MWI, the initiative may be compared against past attempts at watershed management. In order to succeed, a watershed management program must address the ecological, political and social barriers that traditionally present a challenge to new forms of environmental resource protection.³⁶⁵

A. Issues Raised in Past Watershed Management Programs

1. Ecological Issues

The MWI's focus is to structure the programs at the state agency level to conform to the needs of the individual watersheds.³⁶⁶ The role of the volunteer "stream teams," collecting information about local water quality, combined with the establishment of a science and technology center, seeks to create an accurate method of measuring the health of the watershed.³⁶⁷

The MWI therefore intends to cater to the ecological needs of the entire watershed. This approach is comprehensive, utilizing available data to structure state agency action to promote cooperation and coordinated effort to maximize the return on the taxpayer dollar.³⁶⁸ This bottom-up, nonregulatory approach places the ecological health of the watershed as the primary goal. This approach is in contrast to the piecemeal method of passing legislation or allocating scarce

³⁶³ See *id.*

³⁶⁴ See Jewell, *supra* note 323, at 1.

³⁶⁵ See Adler, *supra* note 14, at 991.

³⁶⁶ See EPA PROGRESS, *supra* note 321, at 1.

³⁶⁷ See *id.* at 2.

³⁶⁸ See Jewell, *supra* note 323, at 1.

agency dollars to those interest groups that may be the strongest at any one time. Therefore, the MWI has structured its operative framework to maximize, to the extent possible, the ecological benefit to the environment.³⁶⁹

2. Institutional and Political Resistance

The MWI framework addresses the institutional and political resistance that traditionally has thwarted watershed management projects. It does so, in part, by limiting its focus. This narrow focus may have positive effects by increasing the likelihood that the MWI will succeed where other programs have failed.

In order to meet the stated goals of protecting environmental resources, the MWI primarily addresses state-level decisionmaking. Given that the leader of the environmental agencies is the main proponent of the MWI, it is likely that this project will survive the inter-agency power struggles that arise when resources and responsibilities are restructured.³⁷⁰ As recommendations for allocating agency resources are sent up the chain of command from the watershed teams, the Roundtable, composed of the heads of the environmental agencies, can debate the recommendations before making a final recommendation to the Secretary, who has the power to resolve inter-agency conflicts as the Secretary of the environmental agencies. Therefore, the MWI has incorporated into its framework an internal check to prevent inter-agency conflict from jeopardizing the goals of the MWI.³⁷¹

However, although it is reasonable to begin with only the state's jurisdiction over environmental protection, eventually the MWI must be expanded to deal with local as well as state environmental policies. Massachusetts is a "home rule" state that allows cities and towns to pass local environmental bylaws. Accordingly, the watershed teams will need to incorporate local bylaws, as well as federal statutes and regulations, to create a fully comprehensive framework for allocating resources for environmental protection.

³⁶⁹ See *id.* at 2.

³⁷⁰ As of the time of publication, Trudy Coxe will have left EOEA to take a position in historic preservation in Rhode Island. Watershed advocates are applauding the appointment of Massachusetts State Senator Robert Durand, a long-time defender of the environment and supporter of the MWI, as Coxe's successor.

³⁷¹ See Jewell, *supra* note 323, at 5.

3. Individual Behavior

Traditional command and control environmental regulation often deals with the actions of large economic entities such as industry, municipalities or government. When environmental regulation begins to interfere with individual behavior, such as building homes or driving automobiles, public resistance increases.

The MWI intends to involve a sufficient number of local stakeholders in the decisionmaking process to encourage consensus for any decision.³⁷² By developing comprehensive and respected Watershed Community Councils and watershed teams, the MWI hopes to encourage acceptance of environmental regulations by allowing local individuals and groups to participate in the creation of regulations.³⁷³

Although the MWI has a strong focus on community education and involvement, at a certain point environmental protection might require a greater sacrifice by the local stakeholders. Hopefully this event will coincide with complete local participation in the development of watershed-based environmental policy. This will encourage individuals to alter their behavior because they understand the role that each plays in protecting the environment.³⁷⁴

CONCLUSION

In spite of the billions of dollars spent by industry and municipalities under the CWA, the quality of our waterways continues to decline. This is in part attributable to nonpoint source pollution that is currently not regulated as closely as point source discharges. Given the poor track record of the CWA in addressing the problem of nonpoint source pollution, an alternative to the traditional command and control legislation is needed.

Although in its early stages, the Massachusetts Watershed Initiative promises to improve upon the watershed-based management programs of the past by encouraging local individuals and groups to identify environmental threats and work together to prioritize cleanup efforts. The MWI seeks measurable improvements in environmental quality by educating local stakeholders about the ecological needs of the watershed, while encouraging everyone concerned with environmental protection or environmental regulation to share the

³⁷² See EPA PROGRESS, *supra* note 321, at 2.

³⁷³ See Jewell, *supra* note 323, at 1.

³⁷⁴ See *id.* at 8.

responsibility of keeping our water resources clean. The continued attention to the ecological, institutional, and social challenges of past watershed management programs may improve the chance that the MWI will succeed where other efforts have failed.